

**BEFORE THE UNITED STATES DEPARTMENT OF AGRICULTURE
INDIANAPOLIS, INDIANA**

**DOCUMENTS IN SUPPORT OF
TESTIMONY OF BENJAMIN F. YALE, ESQ. ON BEHALF OF
DAIRY PRODUCERS OF NEW MEXICO
SELECT MILK PRODUCERS, INC.
CONTINENTAL DAIRY PRODUCTS, INC.
LONE STAR MILK PRODUCERS, INC.
ZIA MILK PRODUCERS, INC.**



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**Exhibit
No.**

Title

A	Comparison of Mailbox Prices to ERS Reported Operating and Total Costs For Selected States, 2006
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C	January 2006 Baseline Working Paper - Dairy Portion
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Exhibit No.	Title
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PP	Std of Identity for Cheddar Cheese, 21 C.F.R. "133.113
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SS	Definition of Butter
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ZZ	Van Slyk Formula
AAA	Sensitivity of Class, Component, and Blend Prices to Various Change in Cheese to Protein Formula
BBB	Sensitivity of Class, Component, and Blend Prices By Changes to BF Recovery, Casein Percent, and Fat to Casein Ratio
CCC	Barbano and Lynch, Fact Sheet - Milk Protein Testing - FAQs, Changing from Crude Protein to True Protein, May 14, 1999
DDD	Comparison of Casein in Crude Protein to Implied Casein in True Protein at Two Rates
EEE	Comparison of Impact on Class, Component, and Blend Prices by Changing the Percent of Casein in True Protein to Current Formulas
FFF	CDFA Cheese Processing Costs Released November 2003
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III	Cheese Manufacturing Costs, Current Study Period: January through December 2005 with Comparison to the same time Period Prior Year (2004)
JJJ	Summary of CDFA Cheese Processing Yields
KKK	CDFA Class Utilization 2002-2005
LLL	Milk Pooling Comparative Statement 2004-2005
MMM	Annual Summary DHIA Records California 2002-2005
NNN	California Milk Pricing Formulas

Exhibit

No.	Title
000	Charles Ling Testimony Ex. 18 in Make Allowance Hearing
PPP	Estimating Butterfat Recovery on RCBS Report
QQQ	Ex. 65 from Make Allowance Hearing
RRR	Scherping Press Release
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TTT	Comparison of Impact on Class, Component, and Blend Prices by Correcting Butterfat Recovery in the Cheese to Protein Formula
UUU	Ratio of Butterfat to True Protein at Various Tests
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WWW	Comparison of Impact on Class, Component, and Blend Prices by Correcting Cheese Yields to Current Formulas
XXX	Excerpts from Stephenson and Novakovic, Determination of Butter/Powder Plant Manufacturing Costs Utilizing an Economic Engineering Approach, June 1990, A.E. Res. 90-6 and Stephenson and Novakovic, Manufacturing Costs in Ten Butter/Powder Processing Plants, September 1989, A.E. Res. 89-12
YYY	CDFA Butter and Powder Yields, 1998
ZZZ	Comparison of Impact on Class, Component, and Blend Prices by Correcting the Yield of the NFDM to SNF
AAAA	Comparison of Impact on Class, Component, and Blend Prices by Correcting Yields to Current Formulas
BBBB	Comparison: CME Cheddar Cheese Prices / Audited California Cheddar Cheese Sales 24-Month Period: December 2004 through November 2006
CCCC	Comparison: CME Butter Prices / Audited California Butter Sales 24-Month Period: December 2004 through November 2006
DDDD	Comparison of Impact on Class, Component, and Blend Prices by Make Allowances to Current Formulas
EEEE	Comparison of Impact on Class, Component, and Blend Prices by Correcting Yields and Make Allowances to Current Formulas
FFFF	CME Daily Dairy Report 2/19/07

**Comparison of Mailbox Prices to ERS Reported
Operating and Total Costs For Selected States, 2006**

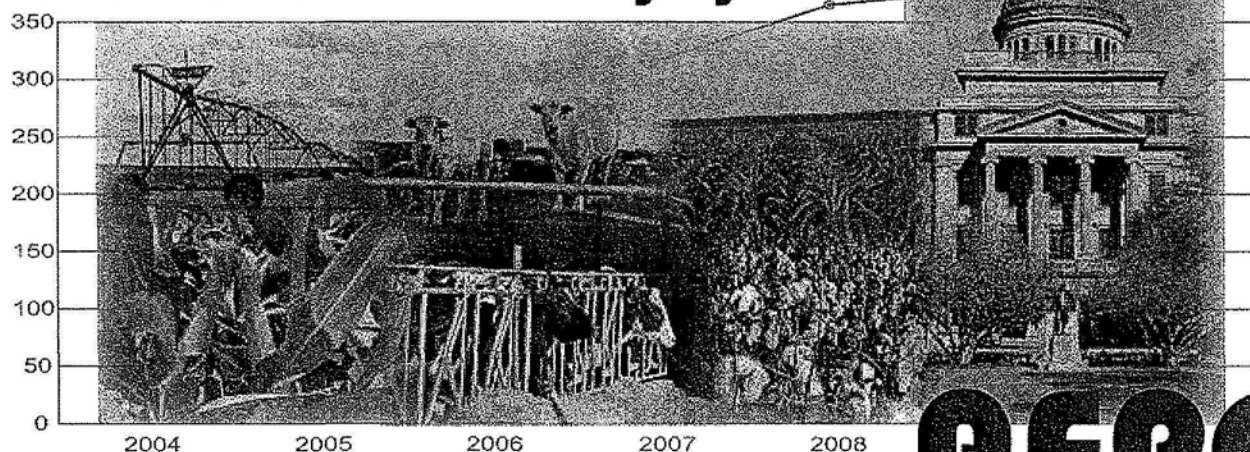
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Ohio													
Mailbox Price	14.64	13.88	12.95	12.16	12.00	11.92	11.82	12.01	12.89	13.81	14.13		12.93
Operating Costs	13.44	13.13	13.31	13.56	13.75	14.06	14.42	14.54	14.24	14.53	15.66	16.16	14.06
Total Costs	25.93	25.22	25.51	25.38	25.49	26.26	26.95	27.2	26.71	27.45	28.41	28.98	26.41
Mailbox less Operating	1.20	0.75	-0.36	-1.40	-1.75	-2.14	-2.60	-2.53	-1.35	-0.72	-1.53		-1.13
Mailbox less Total Costs	-11.29	-11.34	-12.56	-13.22	-13.49	-14.34	-15.13	-15.19	-13.82	-13.64	-14.28		-13.48
Texas													
All Milk Price													
Mailbox Price	13.58	12.45	11.48	10.75	10.68	10.82	10.83	11.36	12.22	12.85	13.22		11.84
Operating Costs	10.92	10.38	10.29	10.52	10.84	11.25	12.05	12.77	12.72	12.7	13.3	13.63	11.61
Total Costs	15.88	15.09	14.93	15.09	15.5	16.13	17.26	18.3	18.29	18.26	18.64	18.91	16.67
Mailbox less Operating	2.66	2.07	1.19	0.23	-0.16	-0.43	-1.22	-1.41	-0.50	0.15	-0.08		0.23
Mailbox less Total Costs	-2.30	-2.64	-3.45	-4.34	-4.82	-5.31	-6.43	-6.94	-6.07	-5.41	-5.42		-4.83
New Mexico													
Mailbox Price	12.74	11.57	10.67	10.10	9.98	9.90	9.88	10.38	11.41	11.97	12.40		11.00
Operating Costs	10.92	10.38	10.29	10.52	10.84	11.25	12.05	12.77	12.72	12.7	13.3	13.63	11.61
Total Costs	15.88	15.09	14.93	15.09	15.5	16.13	17.26	18.3	18.29	18.26	18.64	18.91	16.67
Mailbox less Operating	1.82	1.19	0.38	-0.42	-0.86	-1.35	-2.17	-2.39	-1.31	-0.73	-0.90		-0.61
Mailbox less Total Costs	-3.14	-3.52	-4.26	-4.99	-5.52	-6.23	-7.38	-7.92	-6.88	-6.29	-6.24		-5.67

Representative Farms Economic Outlook for the January 2007 FAPRI/AFPC Baseline

AFPC Working Paper 07-1

February 2007

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A policy working paper is designed to provide economic research on a timely basis. It is an interim product of a larger AFPC research project which will eventually be published as a policy research report. These results are published at this time because they are believed to contain relevant information to the resolution of current policy issues. AFPC welcomes comments and discussions of these results and their implications. Address such comments to the author(s) at:

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**REPRESENTATIVE FARMS ECONOMIC
OUTLOOK FOR THE JANUARY 2007
FAPRI/AFPC BASELINE**

AFPC Working Paper 07-1

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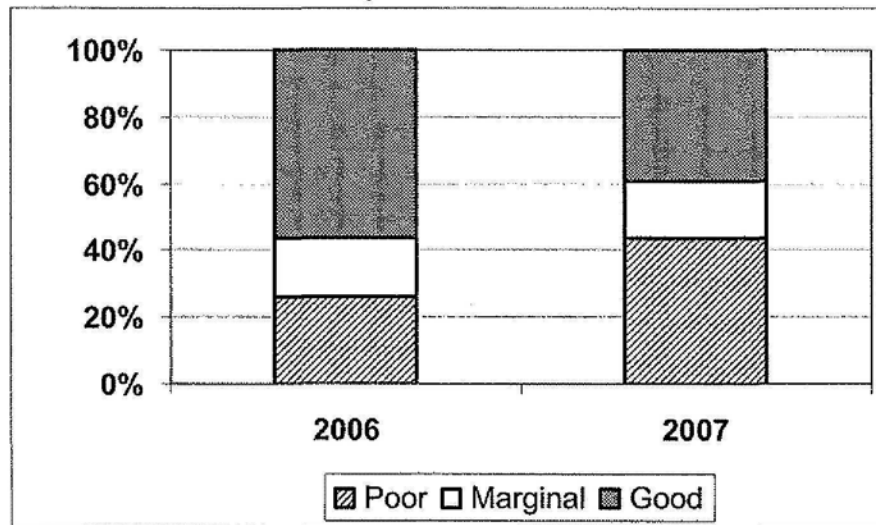
Executive Summary

The Agricultural and Food Policy Center (AFPC) at Texas A&M University develops and maintains data to simulate 99 representative crop, dairy, and livestock operations in major production areas in 28 states. The chief purpose of this analysis is to project those farms' economic viability by region and commodity for 2007 through 2012. The data necessary to simulate the economic activity of these operations is developed through ongoing cooperation with panels of agricultural producers in each of these states. The Food and Agricultural Policy Research Institute (FAPRI) provided projected prices, policy variables, and input inflation rates in their January 2007 Baseline.

Under the January 2007 Baseline, 20 of the 64 crop farms are considered in good liquidity condition (less than a 25 percent chance of negative ending cash in 2012). Five crop farms have between a 25 percent and a 50 percent likelihood of negative ending cash. The remaining 39 crop farms have greater than a 50 percent chance of negative ending cash. Additionally, 30 of the 64 crop farms are considered in good equity position (less than a 25 percent chance of decreasing real net worth during the study period). Nine crop farms have between a 25 percent and 50 percent likelihood of losing real net worth, and 25 crop farms have greater than a 50 percent probability of decreasing real net worth. The following discussion provides an overall evaluation by commodity considering both liquidity and equity measures.

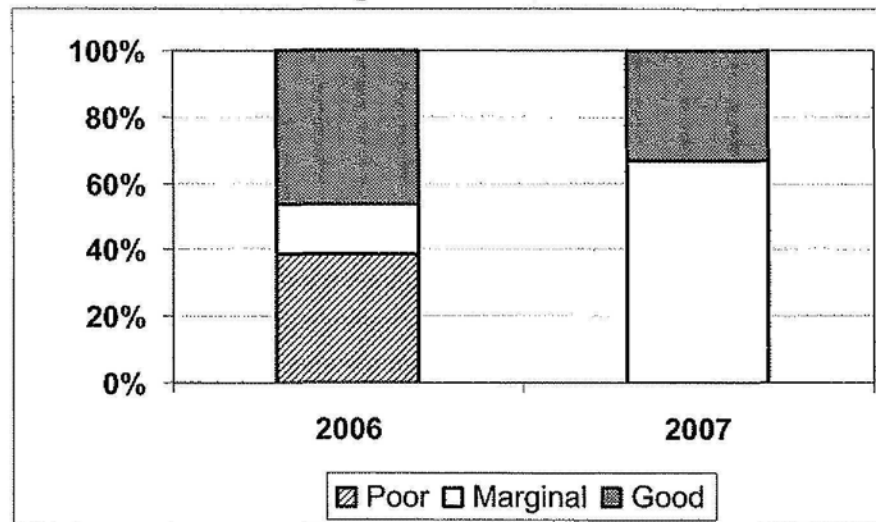
- **FEEDGRAIN FARMS:** Eleven of the 19 feedgrain farms are in good overall financial condition. Two can be considered to be in marginal condition, and six are in poor condition.
- **WHEAT FARMS:** Six of the 11 wheat farms are classified in good financial condition, five are marginal, and none are in poor condition.
- **COTTON FARMS:** Two of the 20 cotton farms are classified in good condition, five are in marginal condition, and 13 are in poor condition. Also, 12 of these farms have more than a 50 percent chance of losing real net worth by 2012.
- **RICE FARMS:** None of the 14 rice farms are in good condition, one is classified in marginal condition, and 13 farms are projected to be in poor financial condition through 2012.
- **DAIRY FARMS:** Nine of the 23 dairy farms are in good overall financial condition. Four are considered to be in marginal condition, and ten are in poor condition.
- **BEEF CATTLE RANCHES:** Four of the 12 cattle ranches are classified in good financial condition, eight are classified in marginal condition, and none are projected to be in poor condition.

Figure 5. Dairies



- Projected increases in feed prices combined with relatively flat milk prices result in a decline in the financial viability of the representative dairies.
- Milk prices are projected to gradually increase from \$14.21/cwt in 2007/08 to \$14.49 in 2012/13.

Figure 6. Ranches



- The number of ranches classified as *poor* is now zero; however, the number of ranches classified as *good* has also declined.
- While high corn prices have driven cattle prices lower, the opening of some export markets and slower expansion of the U.S. cowherd (due to drought) have dampened the price decline.

**Figure 36. Representative Farms
Producing Milk**

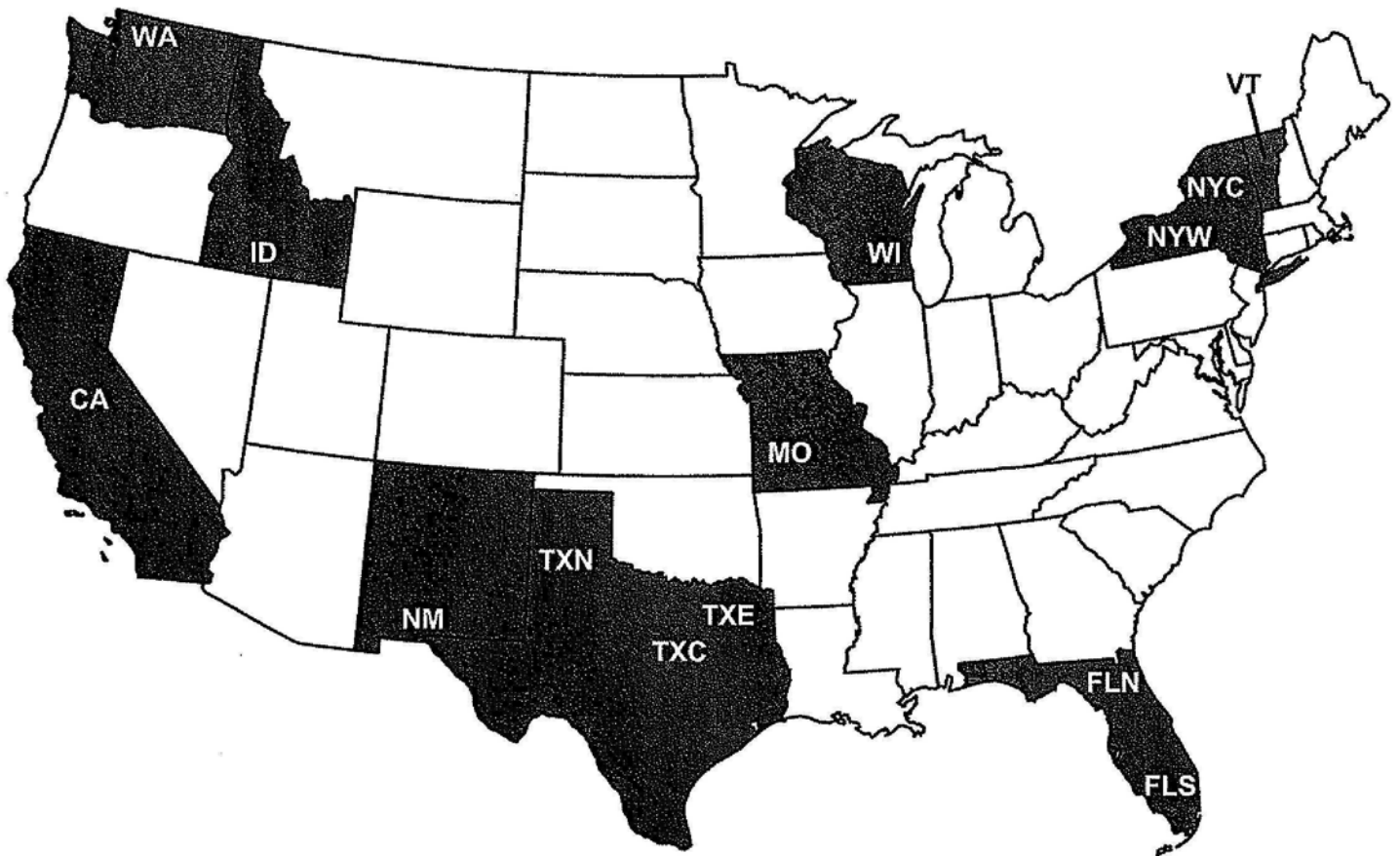


Table 11. Implications of the January 2007 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Milk.

	CAD1710	NMD2125	WAD250	WAD850	IDD1000	IDD3000	TXND3000	TXCD550	TXCD1300
Overall Financial Position 2007-2012 Ranking	Good	Good	Marginal	Poor	Poor	Good	Poor	Poor	Good
Change Real Net Worth (%) 2007-2012 Average	3.17	4.06	3.68	-3.00	1.06	3.12	-5.24	-15.37	2.26
NIA to Maintain Real Net Worth (%/Rec.)	-12.02	-10.73	-16.06	5.15	-3.12	-10.54	6.95	16.86	-5.34
NIA for Zero Ending Cash Balance (%/Rec.)	-4.32	-8.77	0.68	14.12	3.70	-3.86	7.16	25.86	-5.91
Govt Payments/Receipts (%) 2007-2012 Average	0.38	0.01	0.26	0.45	0.02	0.23	0.01	0.05	0.02
Cost to Receipts Ratio (%) 2007-2012 Average	102.36	100.91	97.60	130.53	109.32	105.36	115.12	135.68	103.41
Total Cash Receipts (\$1000)									
2005	6,028.50	7,285.65	935.24	3,200.91	3,786.18	11,108.90	9,747.66	1,678.43	4,431.09
2006	5,121.00	6,351.84	816.06	2,730.04	3,295.48	9,574.87	8,537.01	1,492.19	3,938.97
2007	5,575.98	6,828.44	859.96	2,917.38	3,503.65	10,204.68	9,239.43	1,595.22	4,214.79
2008	5,598.61	6,882.20	860.69	2,927.58	3,537.54	10,315.29	9,309.38	1,605.16	4,247.51
2009	5,677.23	6,983.60	872.31	2,969.17	3,592.84	10,483.99	9,444.54	1,628.52	4,310.29
2010	5,720.74	7,041.16	878.57	2,992.08	3,626.15	10,586.62	9,521.99	1,642.19	4,349.01
2011	5,806.48	7,157.97	891.90	3,039.47	3,688.07	10,772.27	9,679.07	1,669.52	4,420.85
2012	5,863.30	7,235.36	900.68	3,069.86	3,727.19	10,887.64	9,781.85	1,688.02	4,469.38
2007-2012 Average	5,707.06	7,021.49	877.35	2,985.89	3,612.57	10,541.75	9,496.05	1,638.10	4,335.31
Government Payments (\$1000)									
2005	42.75	0.00	6.41	37.66	0.00	76.78	0.00	0.00	0.00
2006	39.86	14.71	17.06	32.32	14.71	50.97	14.71	14.71	14.71
2007	22.05	3.47	4.80	13.46	3.47	23.46	3.47	3.47	3.47
2008	16.65	0.00	1.33	10.01	0.00	20.02	0.00	0.00	0.00
2009	16.67	0.00	1.33	10.01	0.00	20.01	0.00	0.00	0.00
2010	16.65	0.00	1.34	10.01	0.00	20.02	0.00	0.00	0.00
2011	16.68	0.00	1.34	10.04	0.00	20.09	0.00	0.00	0.00
2012	18.70	0.00	1.35	10.08	0.00	20.17	0.00	0.00	0.00
2007-2012 Average	19.24	0.58	1.92	10.60	0.58	20.63	0.58	0.58	0.58
Net Cash Farm Income (\$1000)									
2005	1,605.54	2,058.42	251.11	491.57	740.30	2,959.13	1,673.99	122.53	1,126.44
2006	393.35	721.22	97.56	-146.13	71.93	925.54	-184.37	-196.58	367.37
2007	546.56	947.33	127.92	-48.34	145.25	1,072.03	-49.94	-219.73	431.70
2008	443.04	899.60	110.91	-129.63	103.15	1,001.44	-218.77	-275.56	379.22
2009	453.20	925.64	116.96	-150.27	109.60	1,042.33	-255.44	-308.10	394.35
2010	438.18	903.43	119.80	-178.87	82.51	1,033.50	-350.24	-345.48	388.63
2011	471.77	951.49	131.24	-182.30	101.12	1,128.96	-345.51	-369.35	417.99
2012	475.56	983.11	133.90	-215.65	101.26	1,170.04	-385.47	-403.13	434.74
2007-2012 Average	471.38	937.60	123.46	-150.84	107.15	1,074.72	-267.56	-320.23	407.77
Ending Cash Reserves (\$1000)									
2005	652.27	905.28	82.83	198.02	326.81	1,219.09	806.49	61.74	540.27
2006	672.52	995.51	56.77	-124.71	265.65	1,279.03	348.16	-201.67	589.58
2007	808.74	1,245.82	60.35	-316.63	188.92	1,355.86	-62.79	-489.71	689.99
2008	854.35	1,446.65	35.60	-613.78	79.43	1,399.81	-664.69	-848.65	737.58
2009	898.52	1,613.11	9.79	-983.50	-35.07	1,369.92	-1,320.06	-1,254.06	789.23
2010	920.74	1,755.38	-1.79	-1,383.26	-240.00	1,390.40	-2,062.38	-1,698.85	841.62
2011	951.10	2,009.77	-6.64	-1,744.68	-392.07	1,449.75	-2,796.66	-2,150.16	937.12
2012	945.20	2,245.55	-24.64	-2,158.91	-535.30	1,498.31	-3,590.55	-2,612.91	1,037.21
Nominal Net Worth (\$1000)									
2005	11,089.82	8,931.64	2,308.34	5,559.39	5,440.16	17,802.51	11,859.46	2,371.22	5,586.65
2006	11,755.70	9,195.87	2,473.06	5,413.80	5,579.38	18,601.87	11,167.33	2,154.51	5,600.95
2007	12,379.74	9,683.94	2,616.77	5,398.63	5,707.63	19,368.61	10,788.50	1,932.70	5,765.86
2008	12,974.60	10,151.60	2,754.29	5,295.15	5,828.78	20,194.90	10,238.44	1,660.32	5,896.52
2009	13,616.99	10,613.42	2,908.36	5,167.39	5,961.40	21,041.96	9,599.18	1,355.55	6,022.74
2010	13,902.37	10,934.30	2,997.92	4,891.83	5,906.85	21,474.90	8,825.87	976.74	6,107.65
2011	14,265.08	11,391.89	3,091.69	4,690.45	5,943.96	22,091.46	8,173.87	599.41	6,286.47
2012	14,669.19	11,904.44	3,180.25	4,439.53	6,038.41	22,855.22	7,560.95	219.27	6,487.23
Prob. of Negative Ending Cash (%)									
2007	4	4	11	79	17	5	41	99	5
2008	8	7	23	87	26	10	59	99	8
2009	11	10	33	93	34	14	65	99	11
2010	14	12	35	97	43	16	73	99	14
2011	18	13	36	98	50	19	80	99	16
2012	20	14	41	98	54	22	84	99	18
Prob. of Decreasing Real Net Worth Over 2005-2012 (%)	1	1	1	28	4	1	17	94	2

Table 12. Implications of the January 2007 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Milk.

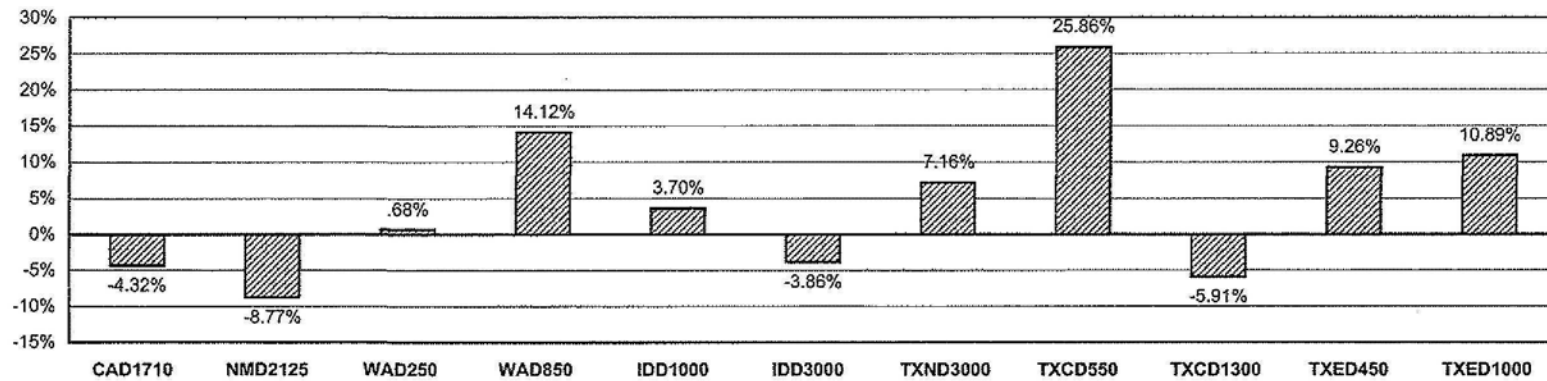
	TXED450	TXED1000	WID145	WID775	NYWD900	NYWD1200	NYCD110	NYCD500
Overall Financial Position								
2007-2012 Ranking	Poor	Poor	Marginal	Good	Poor	Poor	Good	Marginal
Change Real Net Worth (%)								
2007-2012 Average	-0.80	-3.05	3.84	6.40	-2.90	-2.16	8.56	2.62
NIA to Maintain Real Net Worth (%/Rec.)	0.71	5.39	-25.72	-22.65	3.62	3.01	-24.36	-8.22
NIA for Zero Ending Cash Balance (%/Rec.)	9.26	10.89	-0.78	-21.77	14.18	10.26	-22.78	1.70
Govt Payments/Receipts (%)								
2007-2012 Average	0.06	0.03	0.72	0.39	0.76	0.68	0.94	0.65
Cost to Receipts Ratio (%)								
2007-2012 Average	116.42	124.51	92.06	89.71	122.89	118.67	77.25	105.64
Total Cash Receipts (\$1000)								
2005	1,351.45	3,251.04	621.85	3,311.54	3,272.41	4,883.42	506.72	2,155.73
2006	1,208.20	2,869.79	551.55	2,896.98	2,808.47	4,192.58	453.26	1,870.67
2007	1,266.50	3,043.34	564.32	3,006.31	3,040.60	4,541.13	475.54	2,011.92
2008	1,271.46	3,065.84	566.32	3,038.39	3,059.49	4,571.46	475.89	2,023.87
2009	1,268.14	3,114.52	574.26	3,088.07	3,104.35	4,638.06	482.47	2,063.65
2010	1,286.89	3,144.55	579.31	3,122.13	3,132.08	4,679.48	486.78	2,072.78
2011	1,311.45	3,186.79	588.97	3,176.78	3,183.79	4,758.03	494.49	2,106.68
2012	1,323.98	3,229.87	595.70	3,212.71	3,218.66	4,807.62	499.81	2,129.72
2007-2012 Average	1,291.40	3,132.32	578.15	3,107.40	3,123.16	4,665.63	485.80	2,066.43
Government Payments (\$1000)								
2005	0.00	0.00	9.79	36.31	39.79	54.79	7.07	22.06
2006	14.71	14.71	19.53	31.84	49.06	61.99	29.72	33.76
2007	3.47	3.47	6.42	12.92	23.01	30.29	6.89	14.31
2008	0.00	0.00	2.98	9.46	19.56	26.85	3.43	10.85
2009	0.00	0.00	2.98	9.46	19.56	26.85	3.43	10.85
2010	0.00	0.00	3.01	9.46	19.56	26.84	3.43	10.85
2011	0.00	0.00	3.03	9.50	19.60	26.90	3.43	10.87
2012	0.00	0.00	3.06	9.53	19.65	26.97	3.44	10.90
2007-2012 Average	0.58	0.58	3.58	10.05	20.16	27.45	4.01	11.44
Net Cash Farm Income (\$1000)								
2005	243.54	588.62	205.09	1,267.20	503.30	835.99	205.34	500.52
2006	30.58	88.21	117.60	727.57	-95.58	-67.96	137.03	128.88
2007	35.23	59.41	116.97	718.69	-49.90	0.86	147.39	201.68
2008	8.96	-3.80	109.04	701.53	-127.94	-108.06	139.77	159.90
2009	2.35	-21.11	109.71	722.80	-156.78	-153.39	145.06	164.37
2010	-21.76	-53.09	98.29	737.02	-212.54	-207.04	148.28	159.25
2011	-18.41	-64.32	100.23	768.64	-234.09	-235.63	150.90	168.46
2012	-24.75	-91.20	107.08	783.17	-290.16	-285.73	155.01	170.60
2007-2012 Average	-3.06	-29.02	106.89	738.64	-178.57	-165.33	147.74	170.71
Ending Cash Reserves (\$1000)								
2005	121.99	283.11	106.98	637.82	214.38	477.52	104.29	197.73
2006	55.33	142.10	124.20	889.63	-121.19	104.27	149.67	168.59
2007	0.29	-25.86	141.04	1,128.89	-399.22	-136.14	198.46	179.71
2008	-91.69	-274.14	156.83	1,379.17	-714.21	-485.19	243.14	149.25
2009	-207.37	-572.66	163.72	1,603.47	-1,078.37	-923.68	265.52	91.46
2010	-345.61	-903.48	124.14	1,852.68	-1,477.51	-1,420.71	333.58	31.20
2011	-475.10	-1,249.07	71.85	2,099.74	-1,898.19	-2,007.60	374.92	-58.57
2012	-611.67	-1,625.99	18.50	2,371.94	-2,408.51	-2,612.03	428.84	-132.60
Nominal Net Worth (\$1000)								
2005	2,423.31	5,185.87	2,394.76	4,596.61	4,885.44	7,782.70	808.32	3,398.94
2006	2,478.87	5,036.60	2,565.89	5,020.17	4,902.60	7,779.88	899.90	3,579.65
2007	2,526.34	5,009.63	2,732.59	5,429.83	4,923.84	7,852.38	984.20	3,768.60
2008	2,548.28	4,909.20	2,917.85	5,854.17	4,888.74	7,817.50	1,064.07	3,917.93
2009	2,566.52	4,783.06	3,115.47	6,283.72	4,842.17	7,736.03	1,143.68	4,088.23
2010	2,498.76	4,541.88	3,179.39	6,536.32	4,625.09	7,438.50	1,212.42	4,152.09
2011	2,447.05	4,333.39	3,256.87	7,024.66	4,364.08	7,130.10	1,281.31	4,232.65
2012	2,403.73	4,112.31	3,353.41	7,459.69	4,094.55	6,833.26	1,363.93	4,341.01
Prob. of Negative Ending Cash (%)								
2007	37	40	4	3	94	53	3	7
2008	58	62	7	4	94	73	3	13
2009	72	72	9	4	97	83	3	21
2010	83	85	13	4	99	91	2	27
2011	88	90	20	2	99	95	1	36
2012	91	94	31	2	99	96	1	42
Prob. of Decreasing Real Net Worth Over 2005-2012 (%)	8	20	1	1	23	17	1	1

Table 13. Implications of the January 2007 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Milk.

	VTD140	VTD400	MOD85	MOD400	FLND550	FLSD1500
Overall Financial Position						
2007-2012 Ranking	Good	Poor	Marginal	Good	Good	Poor
Change Real Net Worth (%)						
2007-2012 Average	3.13	0.93	3.53	3.73	7.67	-11.66
NIA to Maintain Real Net Worth (%/Rec.)	-12.25	-4.06	-22.80	-15.00	-31.82	14.20
NIA for Zero Ending Cash Balance (%/Rec.)	-2.58	5.89	11.58	-4.21	-26.92	24.16
Govt Payments/Receipts (%)						
2007-2012 Average	0.83	1.03	0.18	0.06	0.04	0.02
Cost to Receipts Ratio (%)						
2007-2012 Average	89.99	105.06	90.12	101.12	82.32	213.97
Total Cash Receipts (\$1000)						
2005	604.40	1,617.31	271.99	1,431.52	1,987.91	5,122.40
2006	580.65	1,455.87	247.19	1,260.32	1,760.63	4,481.27
2007	585.54	1,544.95	252.61	1,317.92	1,847.13	4,739.25
2008	595.62	1,551.93	252.40	1,327.06	1,862.88	4,785.21
2009	593.02	1,573.16	255.77	1,347.61	1,892.08	4,860.54
2010	597.59	1,586.30	257.71	1,360.38	1,911.65	4,910.25
2011	608.99	1,611.63	261.76	1,383.37	1,944.31	4,995.56
2012	613.87	1,629.27	264.59	1,398.42	1,966.90	5,054.82
2007-2012 Average	597.10	1,582.67	257.48	1,355.79	1,904.16	4,890.94
Government Payments (\$1000)						
2005	8.14	29.39	0.00	0.00	0.00	0.00
2006	21.70	39.95	9.65	14.71	14.71	14.71
2007	7.32	17.39	2.31	3.47	3.47	3.47
2008	3.86	13.94	0.00	0.00	0.00	0.00
2009	3.86	13.94	0.00	0.00	0.00	0.00
2010	3.86	13.93	0.00	0.00	0.00	0.00
2011	3.87	13.97	0.00	0.00	0.00	0.00
2012	3.88	14.01	0.00	0.00	0.00	0.00
2007-2012 Average	4.44	14.53	0.38	0.58	0.58	0.58
Net Cash Farm Income (\$1000)						
2005	166.41	286.47	85.51	444.68	849.19	194.52
2006	97.65	56.80	50.76	207.44	503.02	-751.06
2007	114.10	118.40	47.42	198.19	548.40	-697.76
2008	101.20	83.91	41.38	173.22	514.31	-856.22
2009	103.95	84.57	41.53	176.42	549.64	-928.28
2010	103.50	75.79	41.31	176.91	579.29	-1,027.24
2011	105.66	74.45	43.00	190.81	620.40	-1,107.21
2012	107.69	66.43	43.82	196.13	644.37	-1,218.64
2007-2012 Average	106.02	83.92	43.08	185.28	576.07	-972.56
Ending Cash Reserves (\$1000)						
2005	77.44	128.74	26.34	211.15	373.01	76.15
2006	71.21	44.99	20.90	263.13	527.79	-794.57
2007	79.65	22.47	5.98	293.91	724.93	-1,589.62
2008	80.28	-47.61	-9.99	298.47	903.46	-2,554.91
2009	75.33	-121.92	-37.92	278.64	1,097.48	-3,599.08
2010	71.62	-204.18	-70.56	259.66	1,306.85	-4,756.91
2011	70.53	-304.01	-104.91	249.77	1,534.01	-5,998.68
2012	69.03	-416.27	-138.13	237.03	1,771.81	-7,357.01
Nominal Net Worth (\$1000)						
2005	1,288.98	3,258.84	1,141.56	3,137.05	3,306.96	7,586.66
2006	1,497.01	3,657.39	1,268.38	3,413.77	3,691.87	7,068.38
2007	1,566.23	3,762.69	1,346.85	3,621.70	4,067.39	6,560.42
2008	1,637.04	3,834.08	1,428.55	3,825.10	4,441.62	5,925.13
2009	1,715.02	3,927.40	1,515.45	4,035.65	4,849.43	5,238.89
2010	1,751.10	3,923.58	1,550.17	4,142.75	5,167.95	4,229.69
2011	1,803.98	3,936.15	1,566.00	4,275.70	5,525.45	3,210.39
2012	1,853.76	3,961.09	1,627.52	4,415.55	5,910.83	2,110.34
Prob. of Negative Ending Cash (%)						
2007	4	29	31	4	3	99
2008	10	45	53	7	2	99
2009	14	51	71	12	2	99
2010	16	59	87	15	1	99
2011	20	71	95	18	1	99
2012	23	77	98	21	1	99
Prob. of Decreasing Real Net Worth Over 2005-2012 (%)	1	2	1	1	1	89

Figure 37. Dairy Farms

Minimum Annual Percentage Change in Receipts, 2007-2012, Needed to Have a Zero Ending Cash Balance in 2012



Minimum Annual Percentage Change in Receipts, 2007-2012, Needed to Have a Zero Ending Cash Balance in 2012

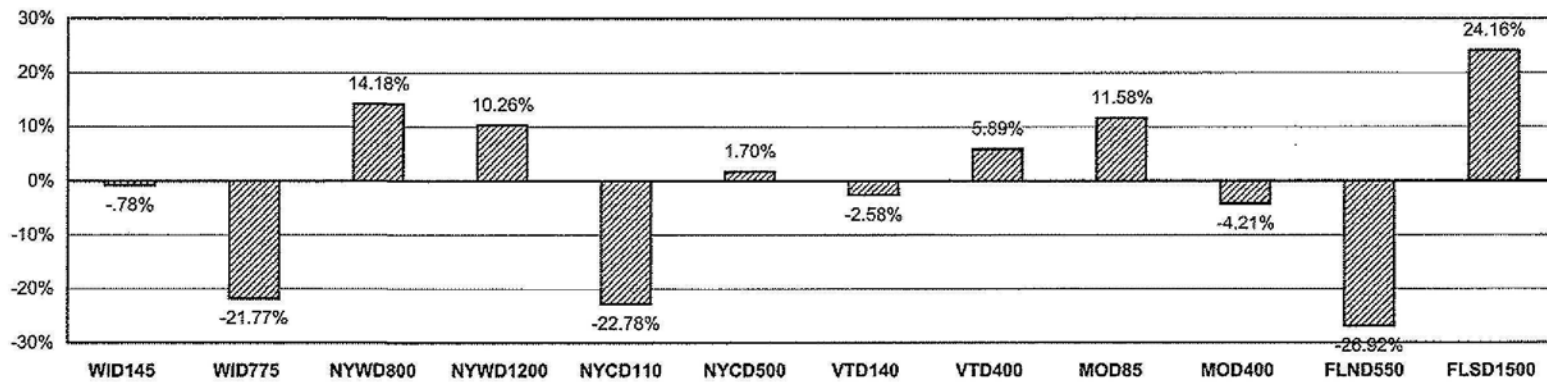
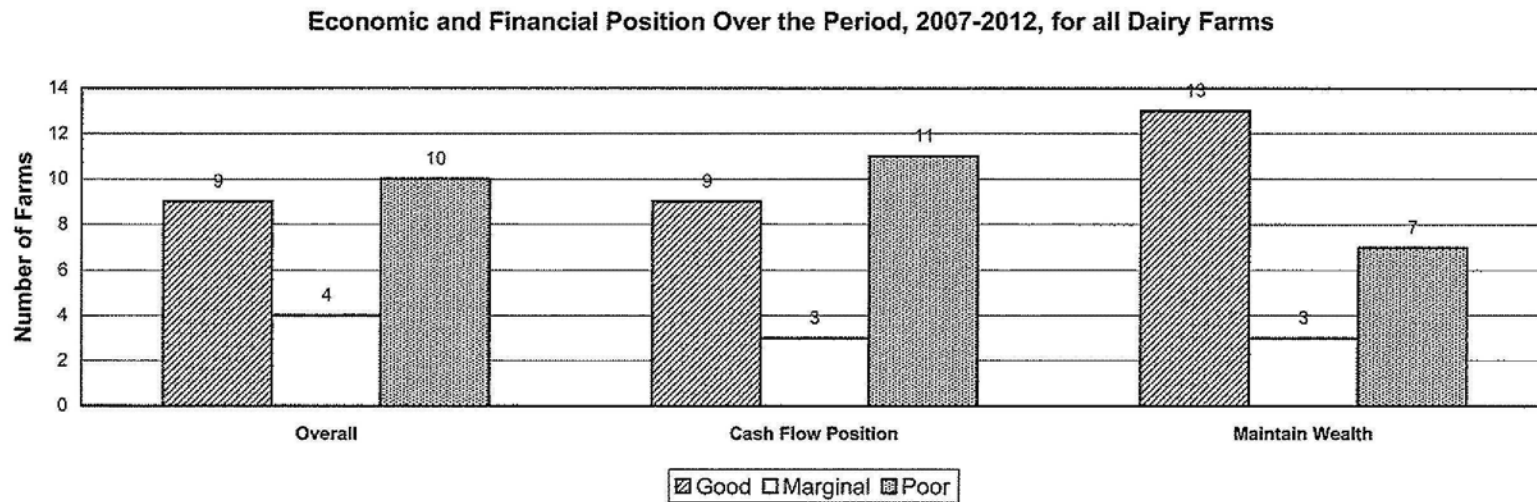
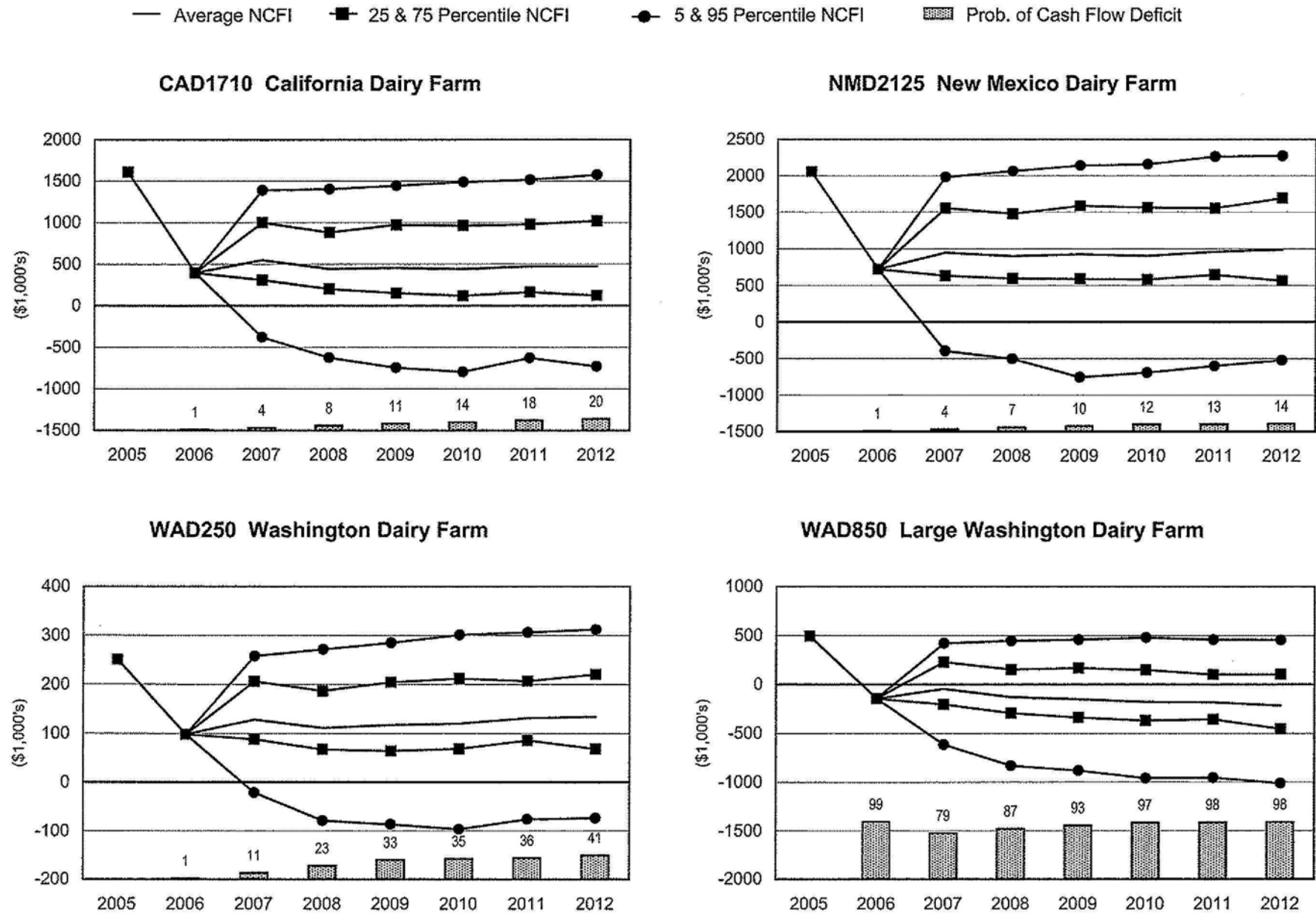


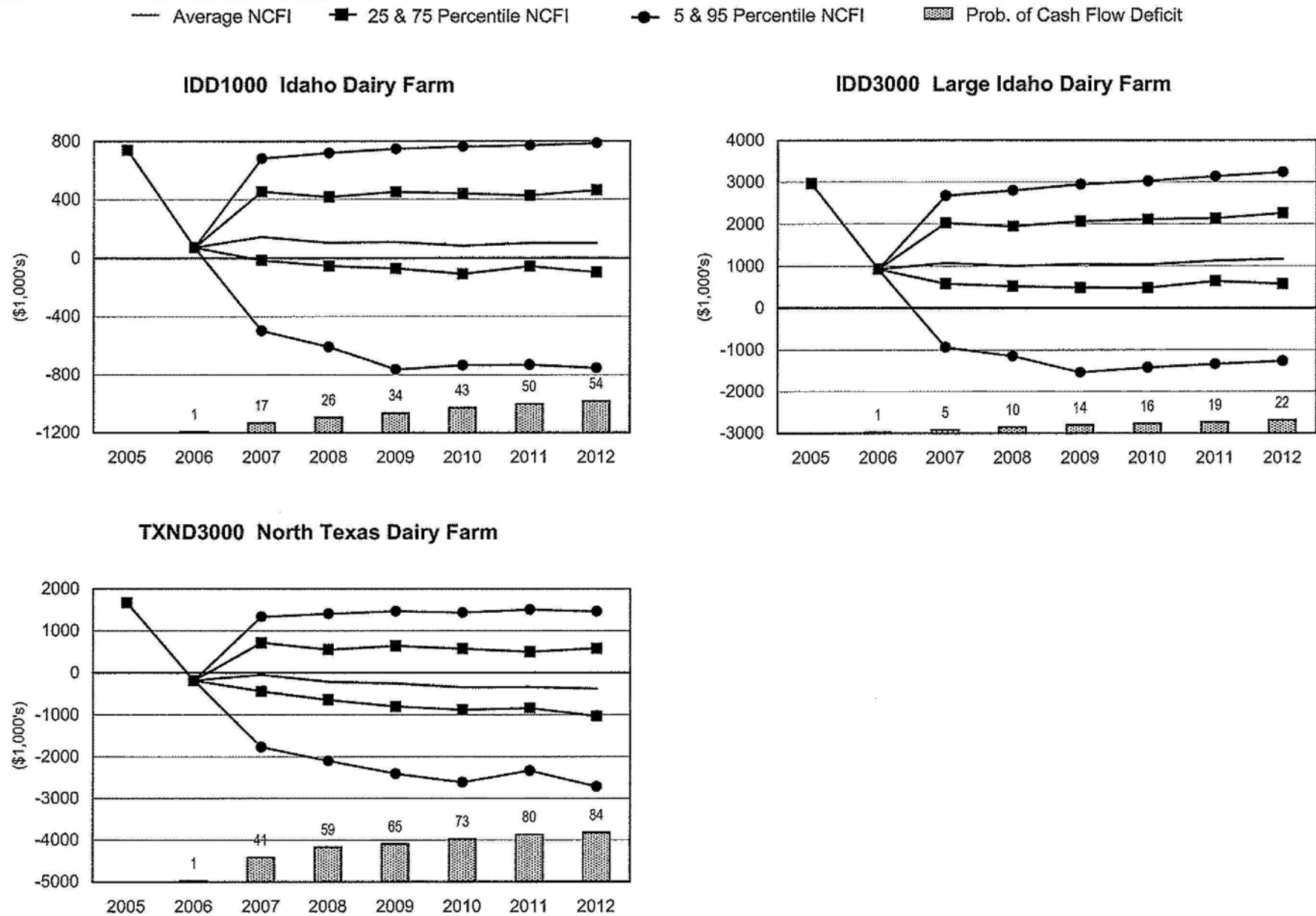
Figure 38. Dairy Farms



**Figure 39. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**



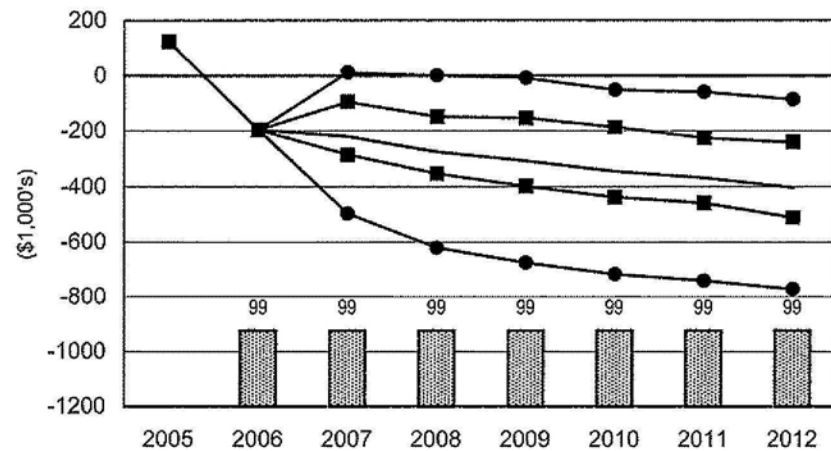
**Figure 40. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**



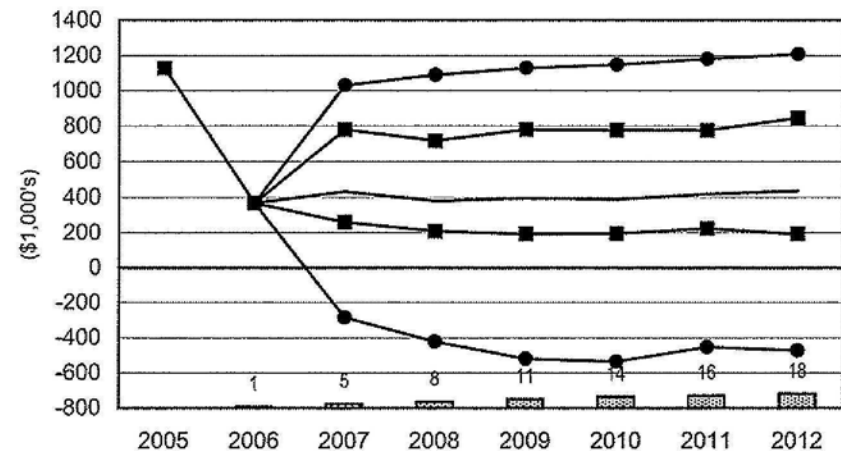
**Figure 41. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**

— Average NCFI ■ 25 & 75 Percentile NCFI ● 5 & 95 Percentile NCFI ▨ Prob. of Cash Flow Deficit

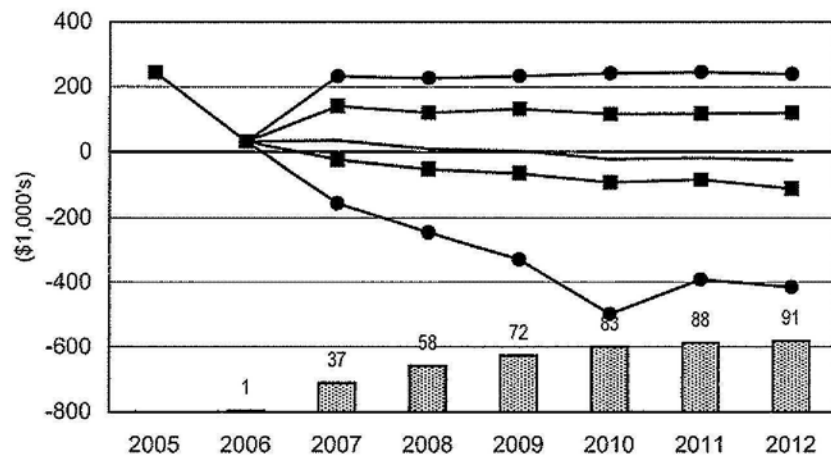
TXCD550 Central Texas Dairy Farm



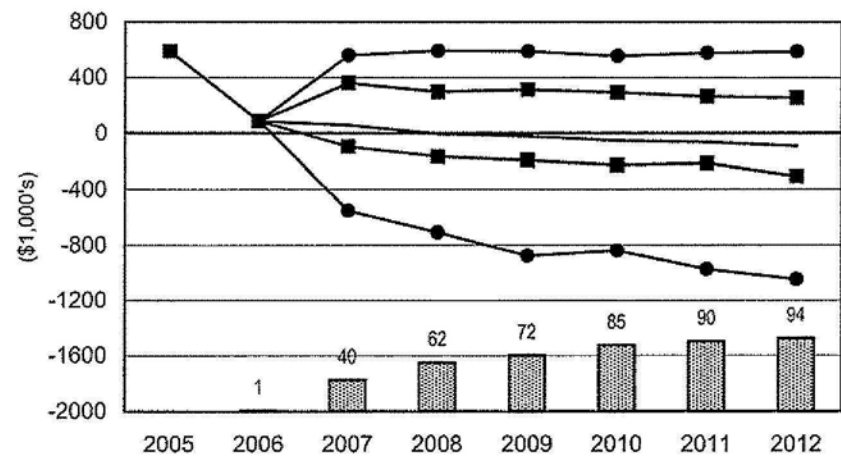
TXCD1300 Large Central Texas Dairy Farm



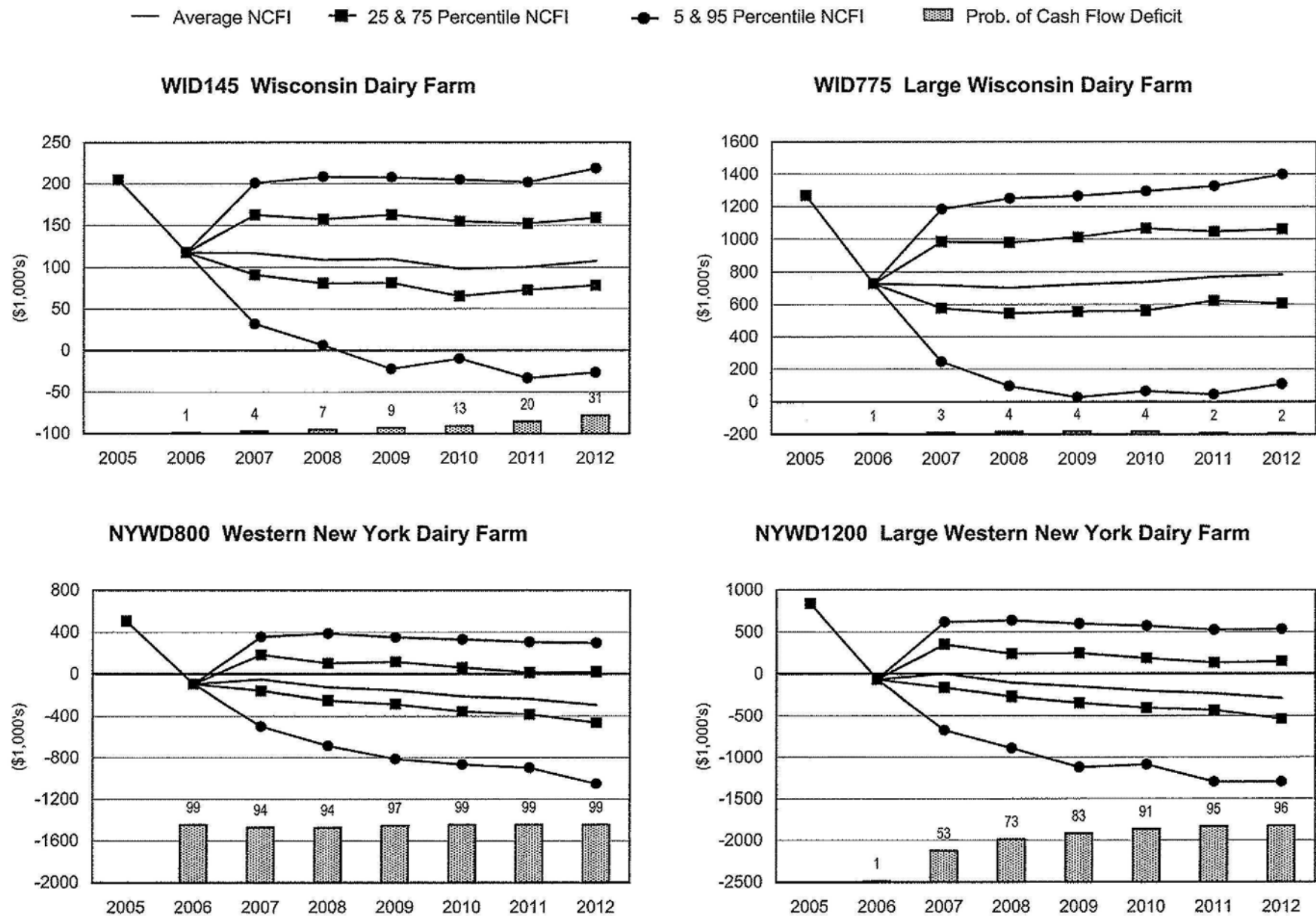
TXED450 East Texas Dairy Farm



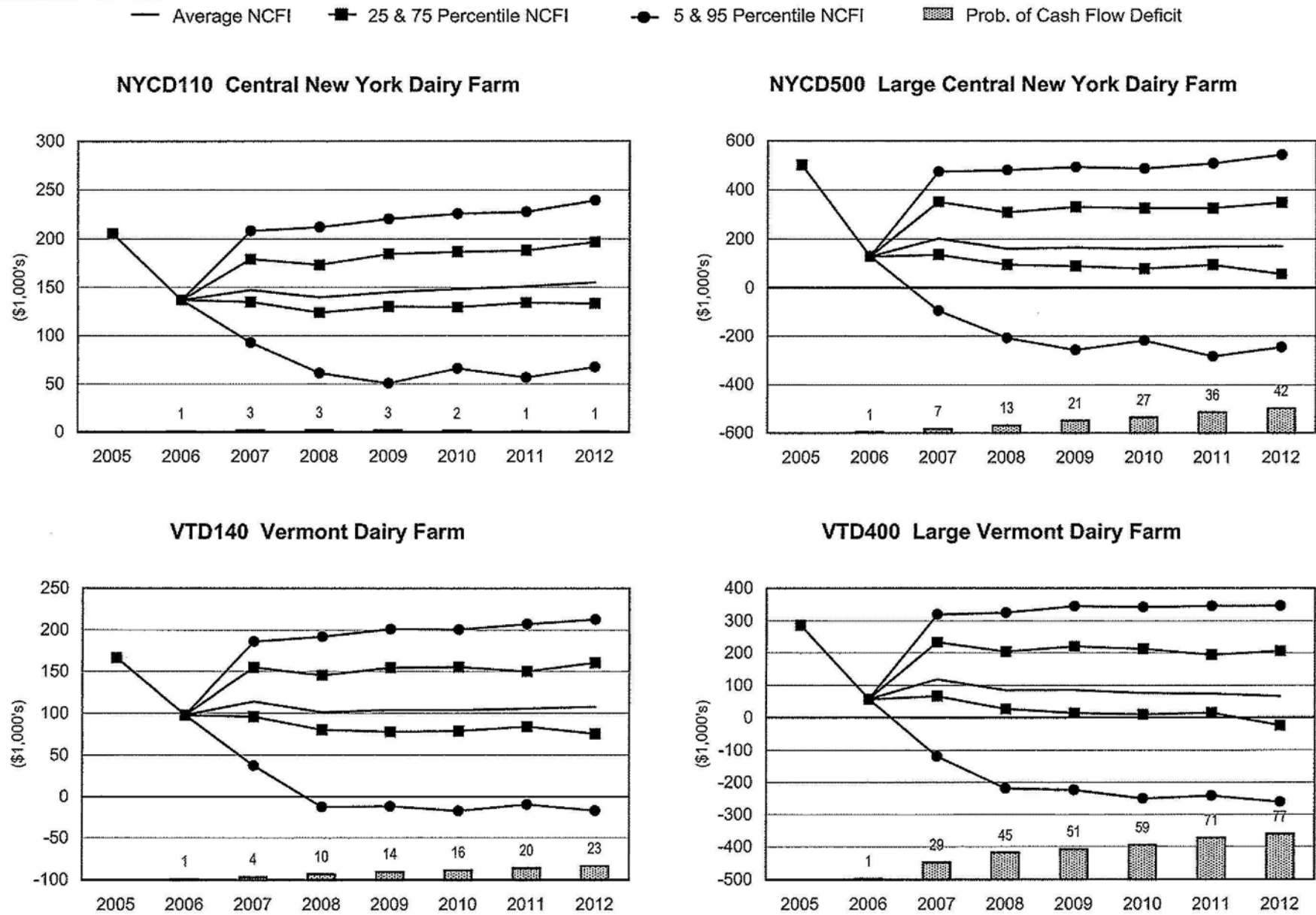
TXED1000 Large East Texas Dairy Farm



**Figure 42. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**



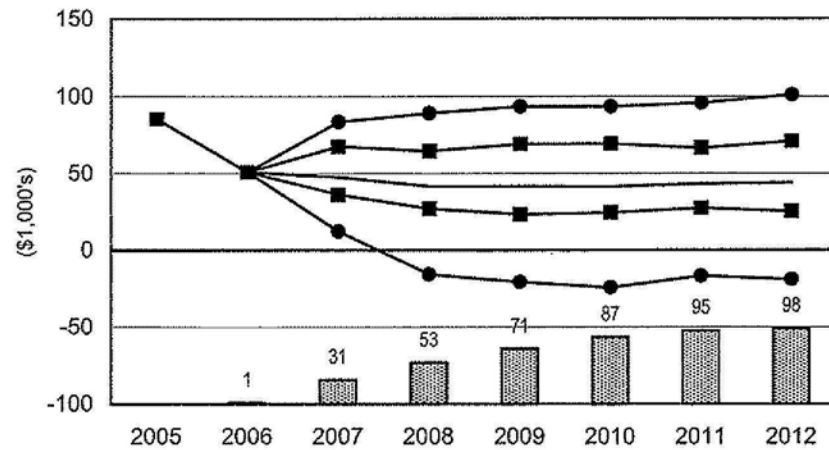
**Figure 43. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**



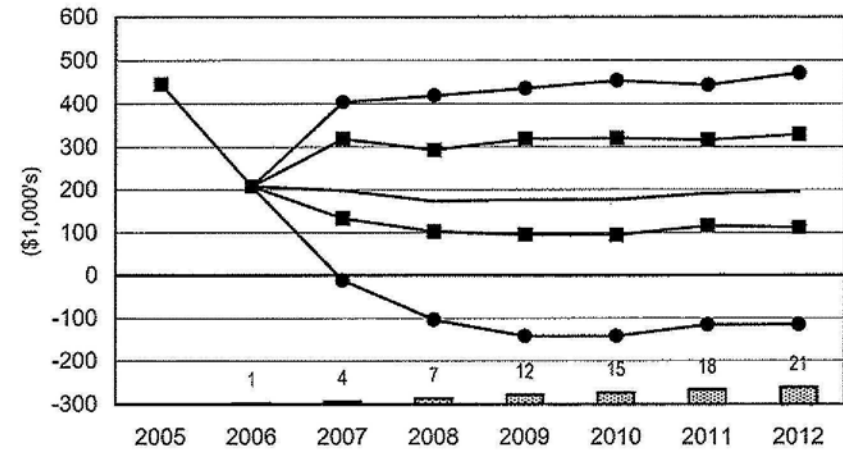
**Figure 44. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**

— Average NCFI ■ 25 & 75 Percentile NCFI ● 5 & 95 Percentile NCFI ▨ Prob. of Cash Flow Deficit

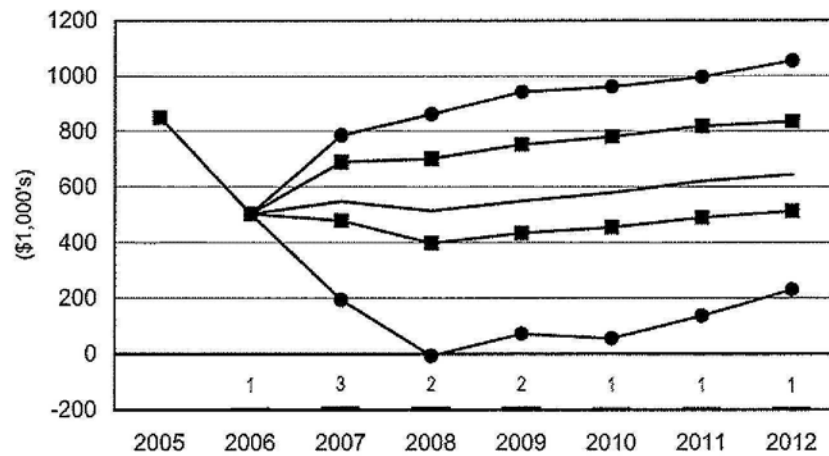
MOD85 Missouri Dairy Farm



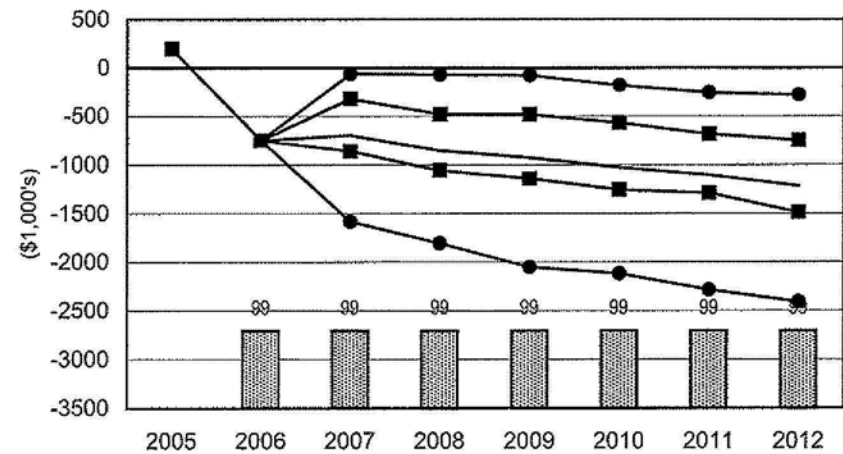
MOD400 Large Missouri Dairy Farm



FLND550 Northern Florida Dairy Farm



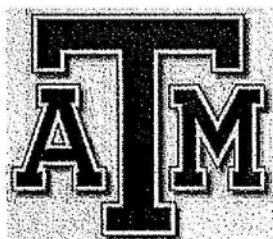
FLSD1500 Southern Florida Dairy Farm



AFPC

Agricultural & Food Policy Center
at Texas A&M University

Representative Farms Economic Outlook for the January 2006 FAPRI/AFPC Baseline



AFPC Working Paper 06-1
February 2006

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A policy working paper is designed to provide economic research on a timely basis. It is an interim product of a larger AFPC research project which will eventually be published as a policy research report. These results are published at this time because they are believed to contain relevant information to the resolution of current policy issues. AFPC welcomes comments and discussions of these results and their implications. Address such comments to the author(s) at:

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**REPRESENTATIVE FARMS ECONOMIC
OUTLOOK FOR THE JANUARY 2006
FAPRI/AFPC BASELINE**

AFPC Working Paper 06-1

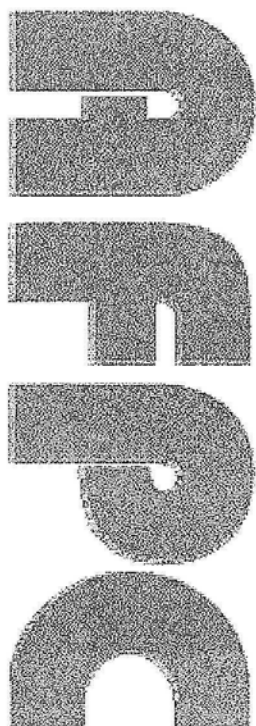
Joe L. Outlaw
James W. Richardson
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George M. Knapek
David P. Anderson
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Executive Summary

The Agricultural and Food Policy Center (AFPC) at Texas A&M University develops and maintains data to simulate 102 representative crop and livestock operations in major production areas in 28 states. The chief purpose of this analysis is to project those farms' economic viability for 2006 through 2010. The data necessary to simulate the economic activity of these operations is developed through ongoing cooperation with panels of agricultural producers in each of these states. The Food and Agricultural Policy Research Institute (FAPRI) provided projected prices, policy variables, and input inflation rates in their January 2006 Baseline.

Under the January 2006 Baseline, eight of the 66 crop farms are considered in good liquidity condition (less than a 25 percent chance of negative ending cash during 2006-2010). Three crop farms have between a 25 percent and a 50 percent likelihood of negative ending cash. The remaining 55 crop farms have greater than a 50 percent chance of negative ending cash. This is a slight decline in projected liquidity from the December 2005 Baseline. Additionally, 17 of the 66 crop farms are considered in good equity position (less than a 25 percent chance of decreasing real net worth during 2006-2010). Five crop farms have between a 25 percent and 50 percent likelihood of losing real net worth, and 44 crop farms have greater than a 50 percent probability of decreasing real net worth. The following discussion provides an overall evaluation by commodity considering both liquidity and equity measures.

- **FEEDGRAIN FARMS:** Three of the 18 feedgrain farms are in good overall financial condition. Six can be considered to be in marginal condition, and nine are in poor condition.
- **WHEAT FARMS:** Four of the 13 wheat farms are classified in good financial condition, one (ORW4000) is marginal, and eight are in poor condition.
- **COTTON FARMS:** One (TNC1900) of the 20 cotton farms is classified in good condition, one (CAC4000) is in moderate condition, and 18 are in poor condition. Also, 18 of these farms have more than a 50 percent chance of losing real net worth by 2010.
- **RICE FARMS:** None of the 15 rice farms are in good condition, two are classified in marginal condition, and 13 farms are projected to be in poor financial condition through 2010.
- **DAIRY FARMS:** Thirteen of the 23 dairy farms are in good overall financial condition. Four are considered to be in marginal condition, and six are in poor condition.
- **BEEF CATTLE RANCHES:** Six of the 13 cattle ranches are classified in good financial condition, two are classified in marginal condition, and five are projected in poor condition.

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**Figure 28. Representative Farms
Producing Milk**

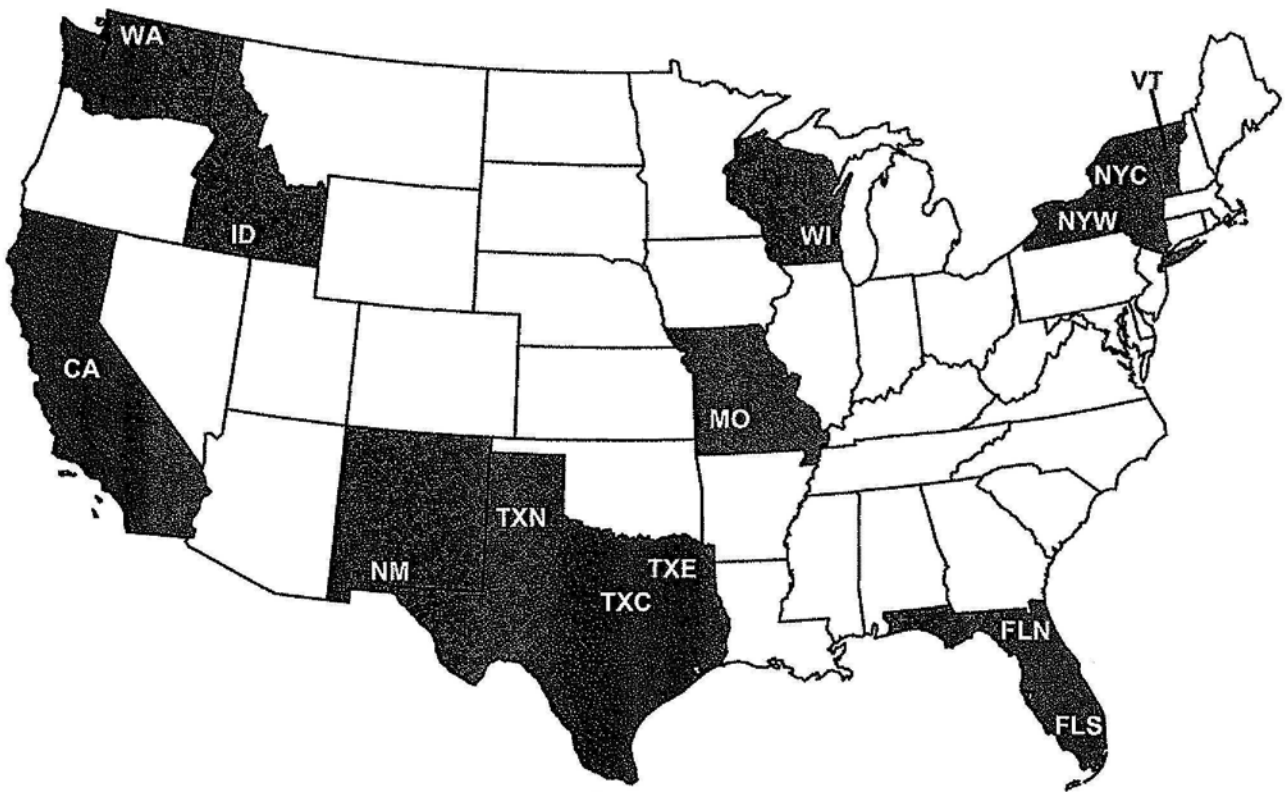


Table 12. Implications of the January 2005 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Milk.

	CAD1710	NMD2125	WAD250	WAD850	IDD1000	IDD3000	TXND2400	TXCD550	TXCD1300
Overall Financial Position									
2006-2010 Ranking	Good	Good	Good	Poor	Marginal	Good	Marginal	Poor	Good
Change Real Net Worth (%)									
2006-2010 Average	2.39	3.03	1.96	-2.43	0.49	2.42	1.69	-7.91	2.42
NIA to Maintain Real Net Worth (%/Rec.)	-12.62	-10.35	-10.83	5.80	-2.52	-10.88	-4.28	13.74	-7.05
NIA for Zero Ending Cash Balance (%/Rec.)	-16.71	-16.68	-5.19	5.25	-5.71	-14.89	-13.32	12.43	-14.55
Govt Payments/Receipts (%)									
2006-2010 Average	0.65	0.07	0.89	0.87	0.14	0.46	0.06	0.30	0.11
Cost to Receipts Ratio (%)									
2006-2010 Average	84.95	84.00	83.43	100.48	93.44	84.52	89.89	108.70	86.34
Total Cash Receipts (\$1000)									
2004	6,215.37	7,531.38	977.97	3,351.52	3,997.91	11,652.24	8,497.27	1,750.23	4,614.82
2005	6,023.15	7,286.23	942.61	3,227.73	3,839.31	11,269.57	8,158.89	1,691.29	4,463.83
2006	5,442.94	6,583.74	859.88	2,900.33	3,459.49	10,093.19	7,345.05	1,538.20	4,060.21
2007	5,422.58	6,553.47	856.70	2,883.96	3,445.90	10,042.19	7,306.50	1,532.51	4,048.58
2008	5,527.77	6,680.32	863.16	2,937.64	3,511.89	10,280.41	7,450.70	1,553.01	4,123.87
2009	5,640.70	6,818.76	881.13	3,001.65	3,584.45	10,476.97	7,604.50	1,584.83	4,209.09
2010	5,722.36	6,914.18	892.90	3,044.08	3,639.33	10,640.12	7,709.31	1,606.86	4,269.38
2006-2010 Average	5,551.27	6,710.10	870.75	2,953.53	3,528.21	10,302.37	7,483.21	1,563.08	4,142.22
Government Payments (\$1000)									
2004	22.18	40.00	2.51	18.86	32.32	78.18	40.00	0.00	0.00
2005	43.42	0.00	6.51	38.35	0.00	78.21	0.00	0.00	0.00
2006	47.32	10.36	14.65	38.51	10.36	68.25	10.36	10.36	10.36
2007	44.86	11.61	15.00	34.01	11.61	57.44	11.61	11.61	11.61
2008	30.47	0.00	2.88	19.43	0.00	39.69	0.00	0.00	0.00
2009	27.90	0.00	2.52	17.28	0.00	35.24	0.00	0.00	0.00
2010	25.81	0.00	2.26	15.72	0.00	31.94	0.00	0.00	0.00
2006-2010 Average	35.29	4.39	7.46	24.99	4.39	46.51	4.39	4.39	4.39
Net Cash Farm Income (\$1000)									
2004	2,062.03	2,623.74	321.50	753.52	1,084.18	3,877.17	2,663.72	318.00	1,534.76
2005	1,565.39	2,009.84	235.77	429.40	762.62	3,107.56	1,850.28	153.49	1,148.03
2006	878.55	1,166.81	147.92	58.52	300.14	1,728.06	885.57	-71.76	616.32
2007	801.98	1,060.63	147.03	15.21	241.81	1,571.56	753.82	-107.75	552.67
2008	833.88	1,099.43	145.06	13.07	257.99	1,672.95	773.95	-131.22	509.21
2009	882.99	1,150.96	158.70	24.20	288.68	1,781.73	824.98	-145.18	605.16
2010	931.62	1,182.91	171.56	40.52	303.07	1,882.63	846.81	-155.03	633.89
2006-2010 Average	865.80	1,132.15	154.05	30.30	278.34	1,727.38	817.03	-122.19	595.45
Ending Cash Reserves (\$1000)									
2004	859.29	1,244.19	116.86	306.60	481.65	1,670.73	1,463.07	146.81	746.24
2005	1,426.79	1,912.50	159.13	383.04	760.92	2,757.90	2,247.66	160.72	1,194.46
2006	1,658.51	2,187.31	143.62	166.12	754.37	3,104.61	2,513.49	-24.76	1,303.87
2007	1,941.02	2,490.84	154.79	-16.07	730.78	3,452.93	2,752.72	-202.19	1,495.85
2008	2,238.23	2,811.97	147.04	-206.23	731.11	3,878.90	3,014.94	-422.05	1,681.44
2009	2,549.33	3,123.72	142.58	-434.41	742.14	4,288.54	3,306.46	-670.26	1,885.46
2010	2,871.00	3,431.65	157.09	-648.12	696.96	4,754.05	3,631.24	-930.35	2,101.57
Nominal Net Worth (\$1000)									
2004	10,168.36	8,405.77	2,038.69	5,179.34	5,085.45	18,522.76	9,318.25	2,207.86	5,473.41
2005	11,409.23	9,585.27	2,266.75	5,506.52	5,677.54	18,639.01	10,298.62	2,350.89	6,099.44
2006	11,988.38	9,970.86	2,380.11	5,421.73	5,807.31	19,482.35	10,411.71	2,212.42	6,224.55
2007	12,309.56	10,251.13	2,431.27	5,244.91	5,794.75	19,905.12	10,496.65	2,017.27	6,346.90
2008	12,556.69	10,549.99	2,458.33	5,040.37	5,790.01	20,347.11	10,650.83	1,781.81	6,488.23
2009	12,924.60	10,958.44	2,514.84	4,878.27	5,854.14	20,969.04	10,912.05	1,554.85	6,692.86
2010	13,321.86	11,370.73	2,594.56	4,727.34	5,896.55	21,656.40	11,169.32	1,331.66	6,911.37
Prob. of Negative Ending Cash (%)									
2006	1	1	1	28	1	1	1	57	1
2007	1	1	6	51	4	1	1	84	1
2008	1	1	13	60	9	1	1	93	1
2009	1	1	15	70	11	1	1	98	1
2010	1	1	14	78	11	1	1	99	1
Prob. of Decreasing Real Net Worth Over 2004-2010 (%)	1	1	1	5	1	1	1	16	1

Table 13. Implications of the January 2006 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Milk.

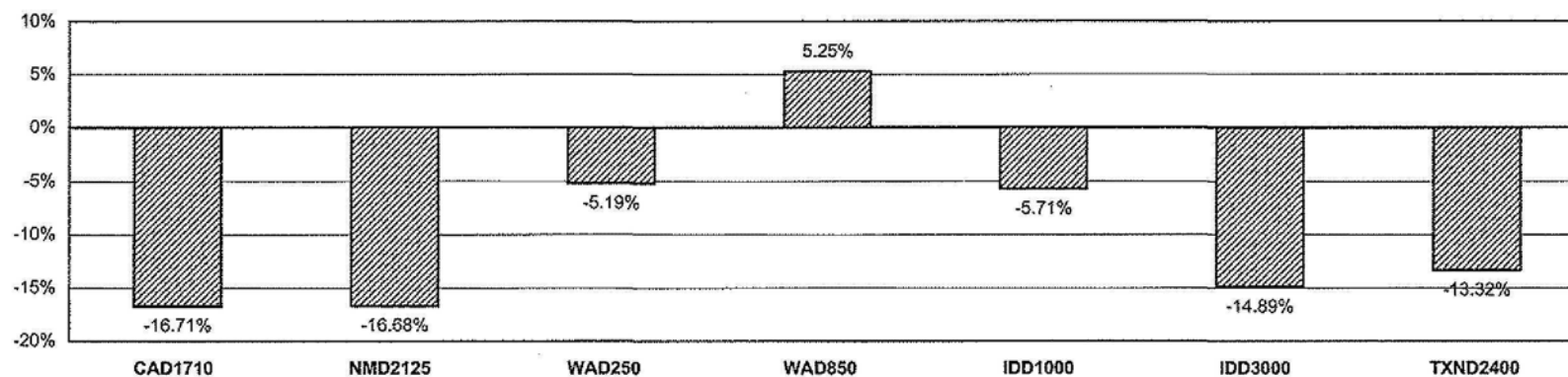
	TXED550	TXED1090	WID145	WID775	NYWD800	NYWD1200	NYCD110	NYCD500
Overall Financial Position								
2006-2010 Ranking	Marginal	Good	Good	Good	Poor	Poor	Good	Good
Change Real Net Worth (%)								
2006-2010 Average	-0.95	3.15	1.62	5.53	-2.75	-2.29	5.11	1.32
NIA to Maintain Real Net Worth (%/Rec.)	2.42	-10.21	-17.32	-22.95	4.75	4.35	-22.35	-5.25
NIA for Zero Ending Cash Balance (%/Rec.)	-4.91	-18.19	-11.46	-30.87	5.76	3.36	-28.97	-4.87
Govt Payments/Receipts (%)								
2006-2010 Average	0.34	0.15	1.93	0.82	1.26	1.12	2.20	1.16
Cost to Receipts Ratio (%)								
2006-2010 Average	93.22	84.27	77.44	71.72	100.85	99.79	68.11	89.53
Total Cash Receipts (\$1000)								
2004	1,573.24	3,525.15	652.85	3,486.17	3,399.97	5,093.02	524.75	2,236.36
2005	1,518.99	3,404.72	622.67	3,316.59	3,208.24	4,788.78	497.66	2,115.04
2006	1,380.17	3,087.16	574.41	3,021.89	2,915.33	4,352.17	465.15	1,935.46
2007	1,375.69	3,076.44	572.07	3,014.20	2,899.88	4,329.95	464.12	1,928.57
2008	1,393.79	3,130.75	571.29	3,059.24	2,950.43	4,410.58	461.61	1,958.28
2009	1,422.81	3,195.19	581.48	3,131.56	3,011.14	4,500.49	470.52	1,988.37
2010	1,443.25	3,240.82	589.31	3,180.66	3,054.13	4,564.51	476.97	2,027.31
2006-2010 Average	1,403.14	3,146.07	577.71	3,083.51	2,966.18	4,431.54	467.68	1,969.60
Government Payments (\$1000)								
2004	0.00	0.00	5.10	18.16	50.51	62.54	8.79	29.64
2005	0.00	0.00	10.00	36.97	40.88	56.29	7.29	22.67
2006	10.36	10.36	18.82	37.88	52.14	67.91	17.73	33.53
2007	11.61	11.61	18.62	33.56	45.48	58.22	17.59	30.39
2008	0.00	0.00	6.12	18.98	30.80	42.38	5.43	17.08
2009	0.00	0.00	5.61	16.83	28.35	39.00	4.99	15.73
2010	0.00	0.00	5.10	15.22	26.67	38.67	4.69	14.79
2006-2010 Average	4.39	4.39	10.83	24.49	36.69	48.83	10.08	22.31
Net Cash Farm Income (\$1000)								
2004	445.08	1,169.79	257.60	1,522.00	805.61	1,249.88	246.57	701.38
2005	305.72	925.67	202.27	1,238.54	428.92	732.28	194.74	453.54
2006	120.64	568.93	136.42	897.46	42.49	111.51	149.58	212.04
2007	103.20	504.32	136.04	884.86	-18.39	15.42	148.67	193.30
2008	103.48	510.39	133.43	890.73	-22.62	10.79	143.77	200.60
2009	114.87	532.12	139.30	919.38	-11.72	19.39	152.27	226.84
2010	122.72	543.53	136.92	953.22	-16.13	35.60	160.02	253.76
2006-2010 Average	112.98	531.86	136.42	905.13	-5.05	38.54	150.86	217.31
Ending Cash Reserves (\$1000)								
2004	220.55	562.89	124.30	751.00	386.31	610.34	121.62	275.66
2005	323.81	934.45	163.03	1,221.08	411.16	754.75	198.30	371.85
2006	302.86	1,107.04	159.92	1,524.46	147.68	421.29	242.17	333.66
2007	302.51	1,314.01	190.03	1,846.42	-84.00	165.50	295.01	335.70
2008	296.31	1,523.50	216.45	2,194.69	-322.70	-117.66	343.49	328.10
2009	287.53	1,744.47	239.94	2,522.99	-554.79	-401.14	390.43	316.40
2010	277.51	1,965.54	222.27	2,879.82	-772.80	-674.93	445.07	319.79
Nominal Net Worth (\$1000)								
2004	1,680.13	4,096.23	1,963.95	4,288.80	4,382.81	6,889.92	749.35	2,994.14
2005	1,849.91	4,664.01	2,208.48	4,997.47	4,773.19	7,528.66	873.86	3,336.22
2006	1,812.30	4,862.04	2,353.79	5,420.67	4,761.36	7,484.70	945.38	3,452.88
2007	1,771.07	5,005.92	2,410.93	5,749.94	4,556.95	7,238.48	1,004.29	3,492.78
2008	1,733.92	5,156.32	2,441.42	6,083.27	4,337.08	6,954.34	1,055.19	3,499.55
2009	1,721.20	5,362.28	2,494.62	6,458.31	4,191.69	6,758.48	1,111.50	3,671.08
2010	1,704.86	5,571.90	2,625.50	6,861.74	4,066.69	6,574.50	1,177.16	3,650.12
Prob. of Negative Ending Cash (%)								
2006	1	1	1	1	24	9	1	1
2007	5	1	1	1	58	35	1	2
2008	11	1	1	1	75	55	1	5
2009	14	1	1	1	85	69	1	8
2010	15	1	1	1	89	79	1	9
Prob. of Decreasing Real Net Worth Over 2004-2010 (%)	1	1	1	1	2	1	1	1

Table 14. Implications of the January 2006 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Milk.

	VTD134	VTD350	MOD85	MOD400	FLND550	FLSD1500
Overall Financial Position						
2006-2010 Ranking	Good	Poor	Marginal	Good	Good	Poor
Change Real Net Worth (%)						
2006-2010 Average	2.65	-1.31	1.05	2.79	6.49	-7.21
NIA to Maintain Real Net Worth (%/Rec.)	-10.51	2.79	-10.95	-15.00	-31.16	12.35
NIA for Zero Ending Cash Balance (%/Rec.)	-13.86	3.79	7.99	-13.44	-35.27	11.73
Govt Payments/Receipts (%)						
2006-2010 Average	1.47	1.63	1.19	0.35	0.25	0.10
Cost to Receipts Ratio (%)						
2006-2010 Average	79.50	97.39	80.37	80.52	65.06	111.06
Total Cash Receipts (\$1000)						
2004	617.47	1,468.48	284.66	1,498.46	2,013.09	5,192.60
2005	594.02	1,413.22	272.56	1,434.54	1,987.44	5,121.24
2006	555.88	1,299.85	253.57	1,305.20	1,841.75	4,708.28
2007	554.97	1,292.77	253.27	1,302.75	1,843.66	4,707.23
2008	553.82	1,305.93	250.21	1,319.76	1,869.62	4,792.52
2009	564.09	1,330.49	254.89	1,347.59	1,906.73	4,889.09
2010	571.56	1,348.03	258.13	1,367.80	1,936.41	4,965.43
2006-2010 Average	560.06	1,315.42	254.01	1,326.62	1,879.63	4,812.51
Government Payments (\$1000)						
2004	7.50	23.35	3.31	14.74	0.00	0.00
2005	4.65	21.33	0.00	0.00	0.00	0.00
2006	15.11	32.18	6.80	10.36	10.36	10.36
2007	15.44	29.16	7.73	11.61	11.61	11.61
2008	3.47	15.90	0.00	0.00	0.00	0.00
2009	3.18	14.58	0.00	0.00	0.00	0.00
2010	2.98	13.67	0.00	0.00	0.00	0.00
2006-2010 Average	8.03	21.10	2.91	4.39	4.39	4.39
Net Cash Farm Income (\$1000)						
2004	218.07	342.26	102.32	557.63	957.09	681.01
2005	166.15	209.00	74.83	426.13	762.58	286.17
2006	118.98	57.31	54.08	274.71	628.07	-421.06
2007	116.61	38.15	54.39	265.54	641.61	-479.85
2008	110.55	30.44	49.42	263.85	652.17	-511.14
2009	118.35	39.92	50.74	276.34	684.68	-516.62
2010	121.23	46.32	52.66	288.68	721.97	-510.29
2006-2010 Average	117.14	42.43	52.26	273.82	665.73	-487.79
Ending Cash Reserves (\$1000)						
2004	106.79	143.41	27.12	243.30	418.85	310.52
2005	158.65	161.65	26.18	379.35	676.48	343.65
2006	175.08	68.56	4.00	413.06	884.50	-253.47
2007	208.04	6.10	-6.55	479.63	1,118.44	-845.93
2008	231.52	-74.43	-23.02	526.50	1,356.96	-1,484.15
2009	262.63	-142.15	-48.13	561.85	1,610.31	-2,130.05
2010	283.51	-207.74	-76.60	602.13	1,881.62	-2,785.64
Nominal Net Worth (\$1000)						
2004	926.98	2,814.85	948.15	2,750.71	2,912.54	7,016.03
2005	1,049.34	3,060.86	1,058.36	3,117.92	3,400.35	7,475.77
2006	1,104.53	3,087.57	1,125.04	3,317.03	3,747.90	7,057.24
2007	1,137.34	3,028.17	1,146.86	3,432.19	4,026.16	6,441.99
2008	1,161.97	2,943.79	1,148.46	3,515.03	4,284.92	5,749.04
2009	1,203.84	2,900.12	1,161.04	3,632.11	4,594.47	5,126.77
2010	1,240.23	2,862.72	1,175.32	3,749.14	4,923.41	4,494.12
Prob. of Negative Ending Cash (%)						
2006	1	23	44	1	1	71
2007	1	47	55	1	1	92
2008	1	63	67	1	1	98
2009	1	73	83	1	1	99
2010	1	80	94	1	1	99
Prob. of Decreasing Real Net Worth Over 2004-2010 (%)	1	1	1	1	1	12

Figure 29. Dairy Farms

Minimum Annual Percentage Change in Receipts, 2006-2010, Needed to Have a Zero Ending Cash Balance in 2010



Minimum Annual Percentage Change in Receipts, 2006-2010, Needed to Have a Zero Ending Cash Balance in 2010

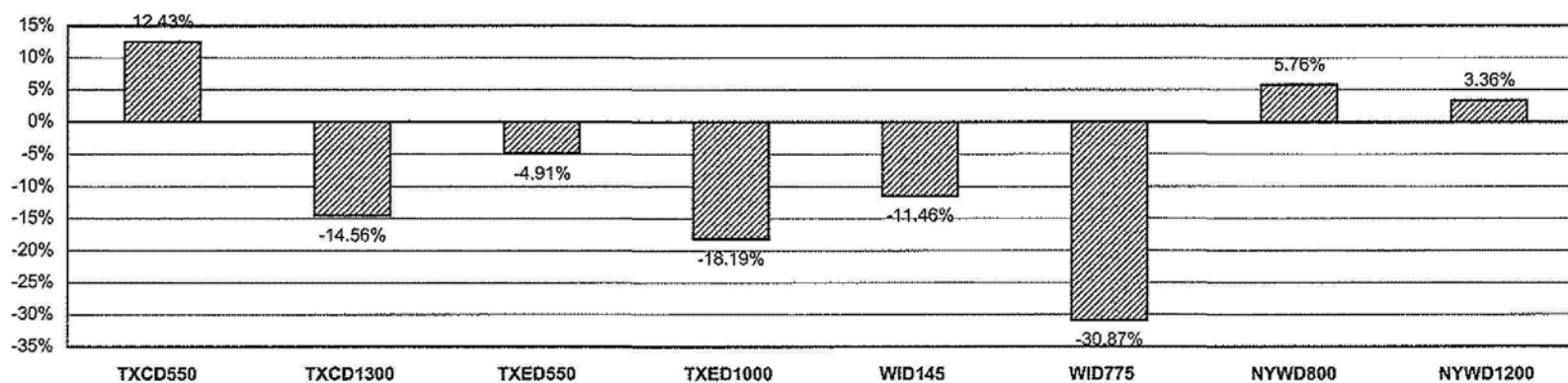
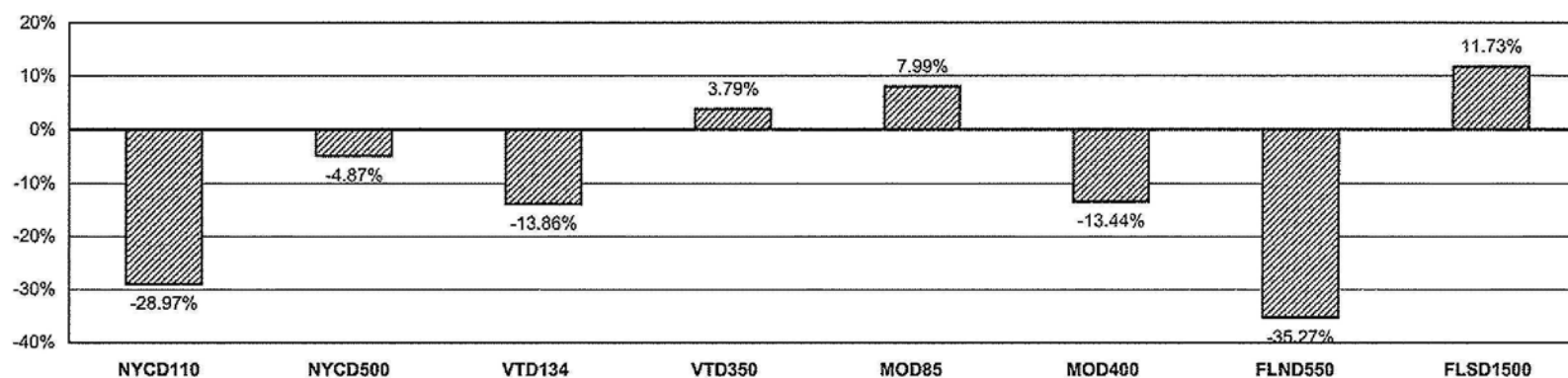
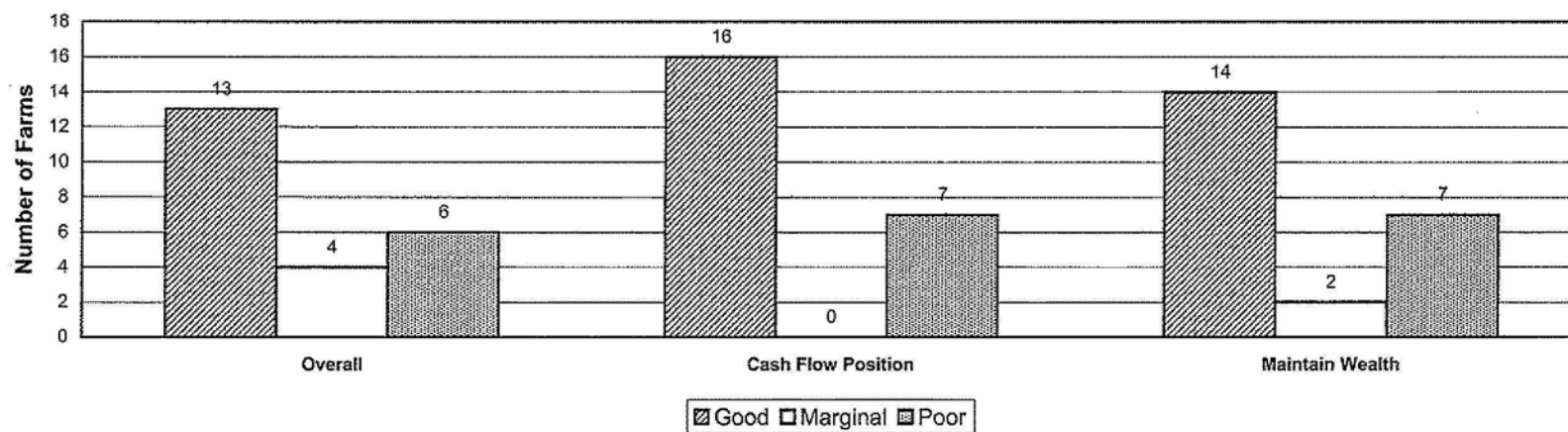


Figure 30. Dairy Farms

Minimum Annual Percentage Change in Receipts, 2006-2010, Needed to Have a Zero Ending Cash Balance in 2010



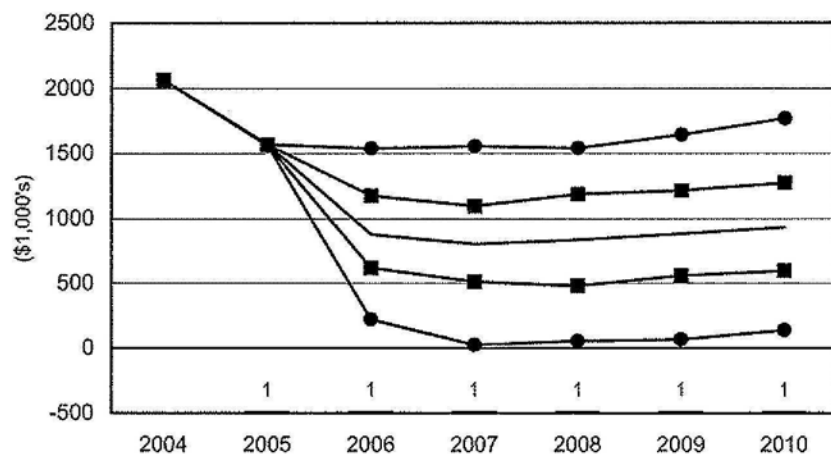
Economic and Financial Position Over the Period, 2006-2010, for all Dairy Farms



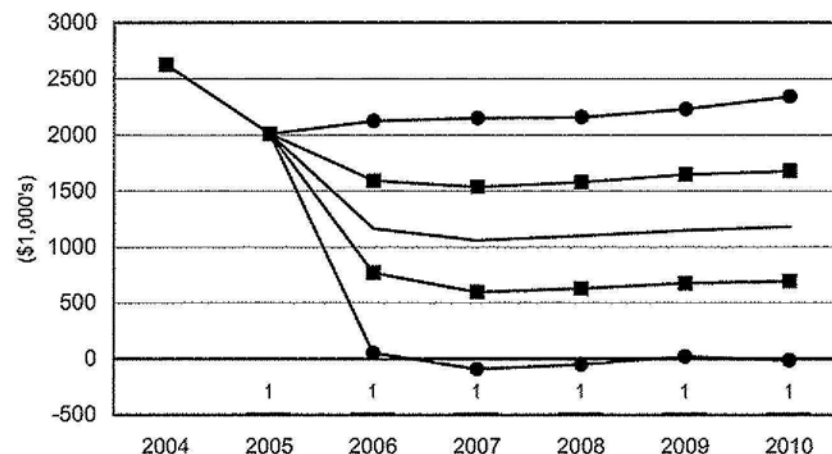
**Figure 31. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**

— Average NCFI ■ 25 & 75 Percentile NCFI ● 5 & 95 Percentile NCFI ▨ Prob. of Cash Flow Deficit

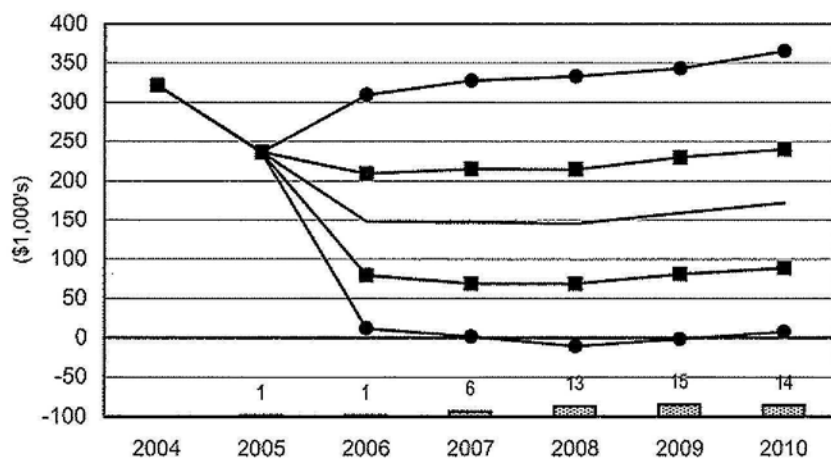
CAD1710 California Dairy Farm



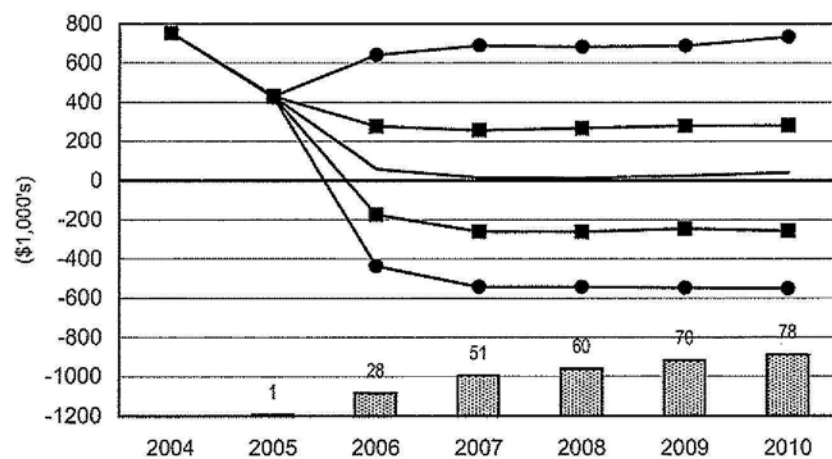
NMD2125 New Mexico Dairy Farm



WAD250 Wahington Dairy Farm



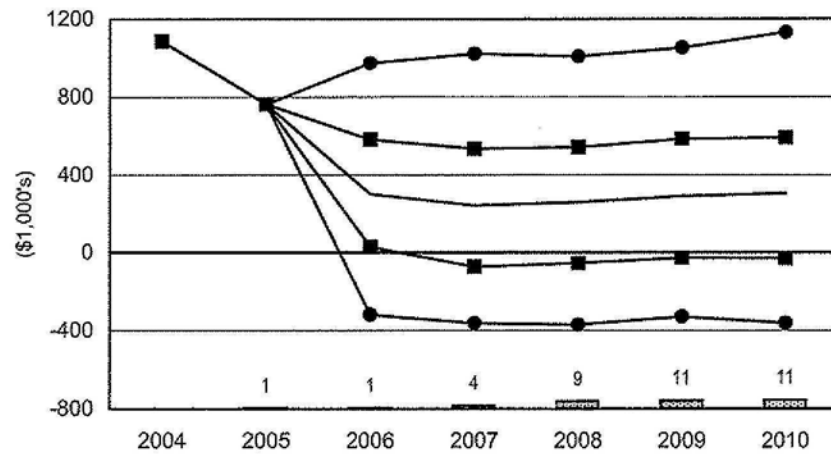
WAD850 Large Wahington Dairy Farm



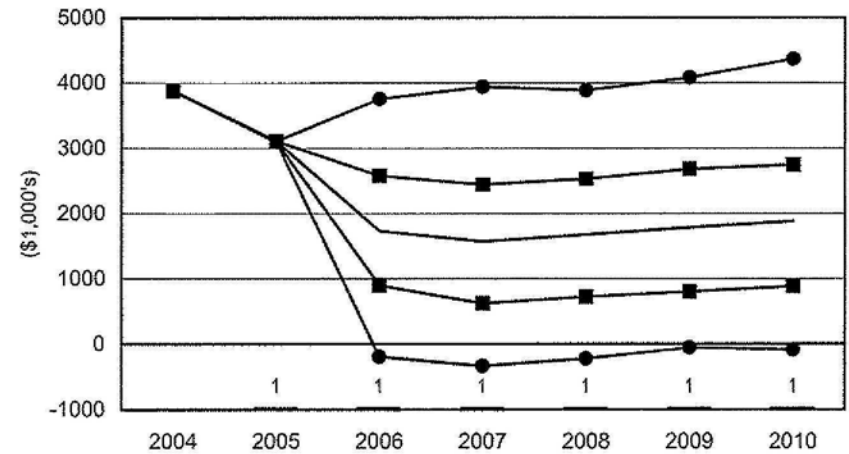
**Figure 32. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**

— Average NCFI ■ 25 & 75 Percentile NCFI ● 5 & 95 Percentile NCFI ▨ Prob. of Cash Flow Deficit

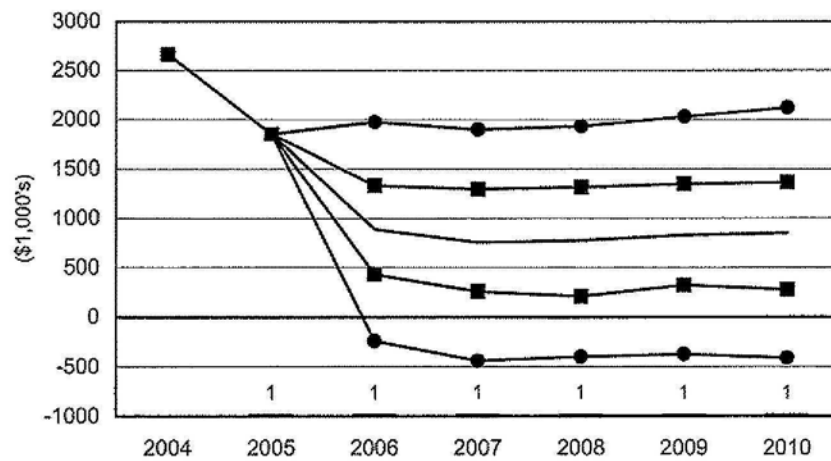
IDD1000 Idaho Dairy Farm



IDD3000 Large Idaho Dairy Farm



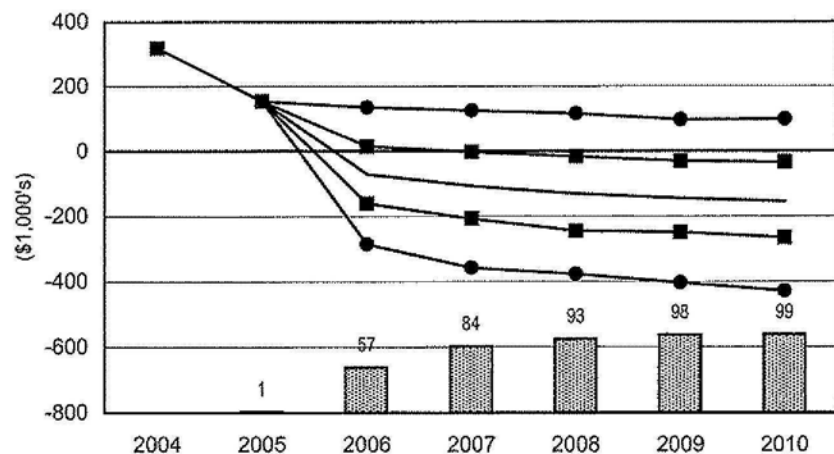
TXND2400 North Texas Dairy Farm



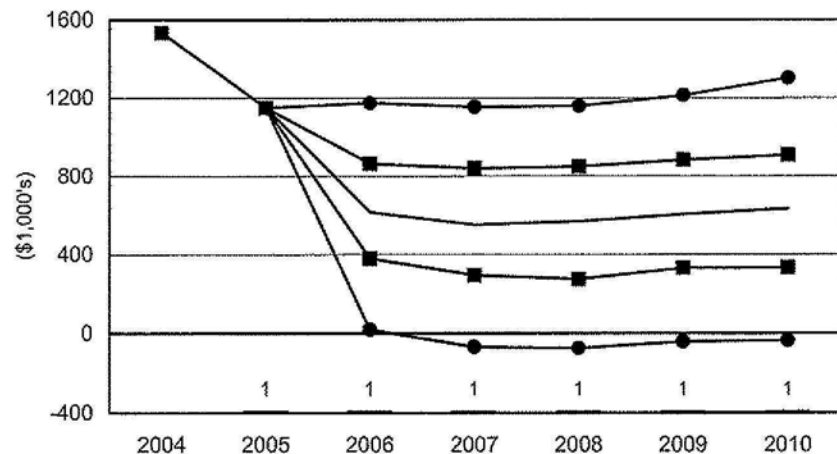
**Figure 33. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**

— Average NCFI ■ 25 & 75 Percentile NCFI ● 5 & 95 Percentile NCFI ▨ Prob. of Cash Flow Deficit

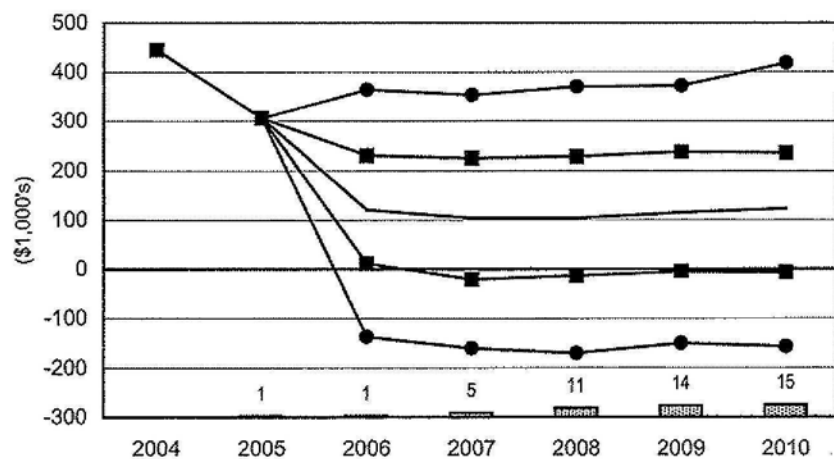
TXCD550 Central Texas Dairy Farm



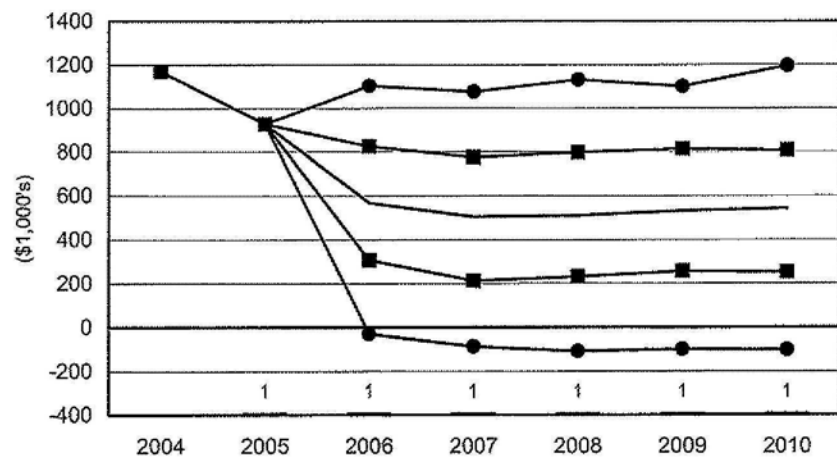
TXCD1300 Large Central Texas Dairy Farm



TXED550 East Texas Dairy Farm



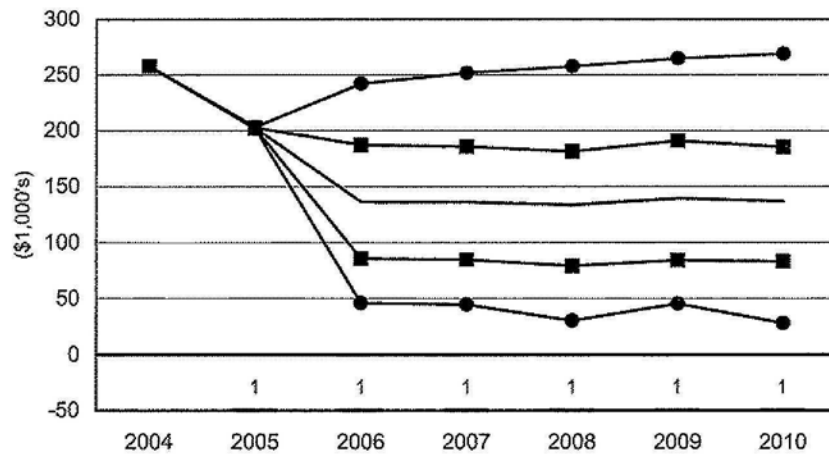
TXED1000 Large East Texas Dairy Farm



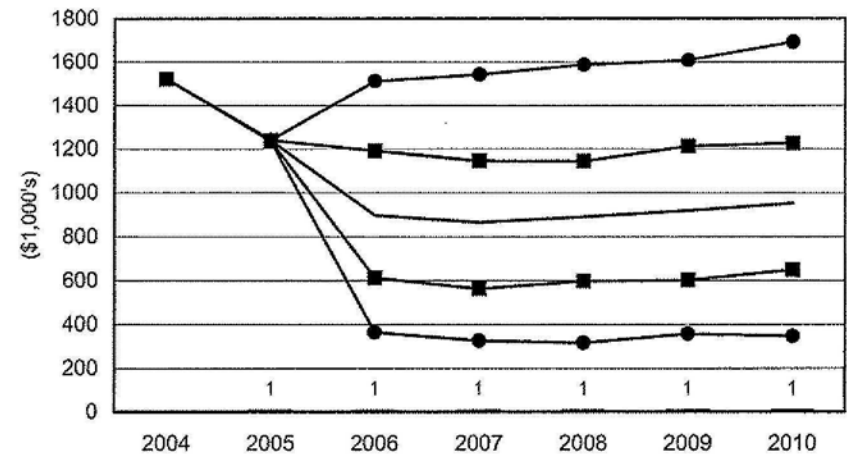
**Figure 34. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**

— Average NCFI ■ 25 & 75 Percentile NCFI ● 5 & 95 Percentile NCFI ▨ Prob. of Cash Flow Deficit

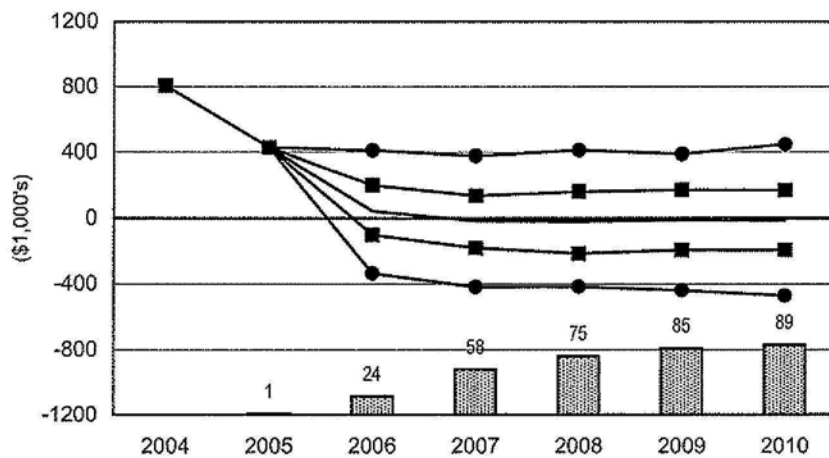
WID145 Wisconsin Dairy Farm



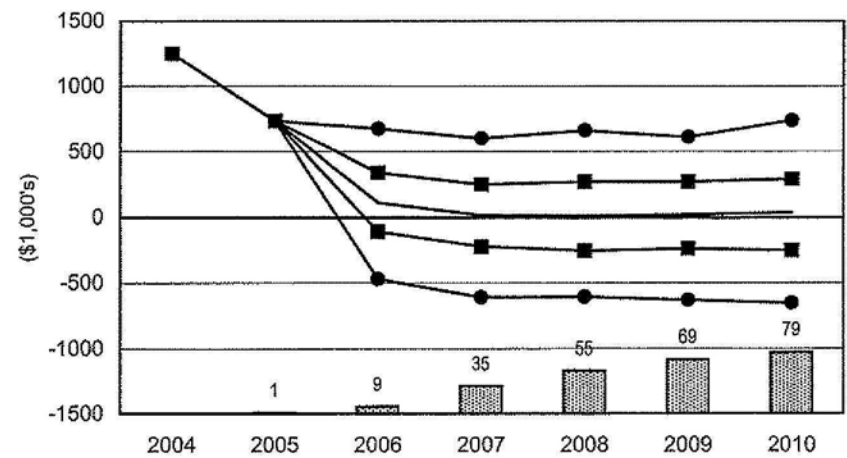
WID775 Large Wisconsin Dairy Farm



NYWD800 Western New York Dairy Farm



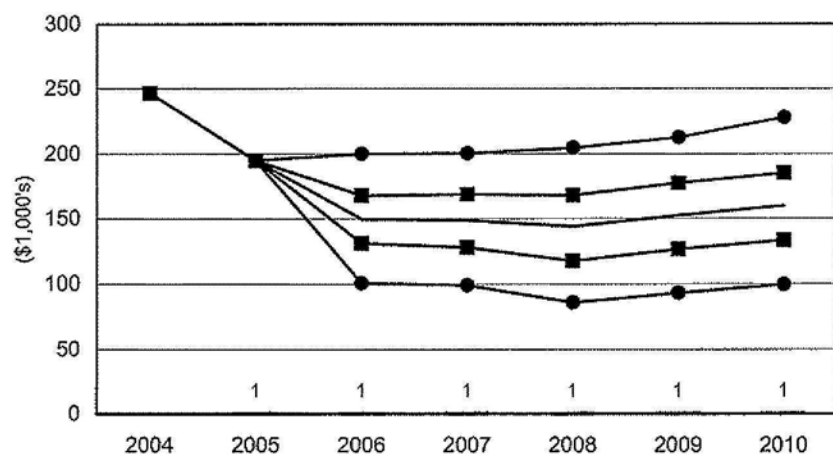
NYWD1200 Large Western New York Dairy Farm



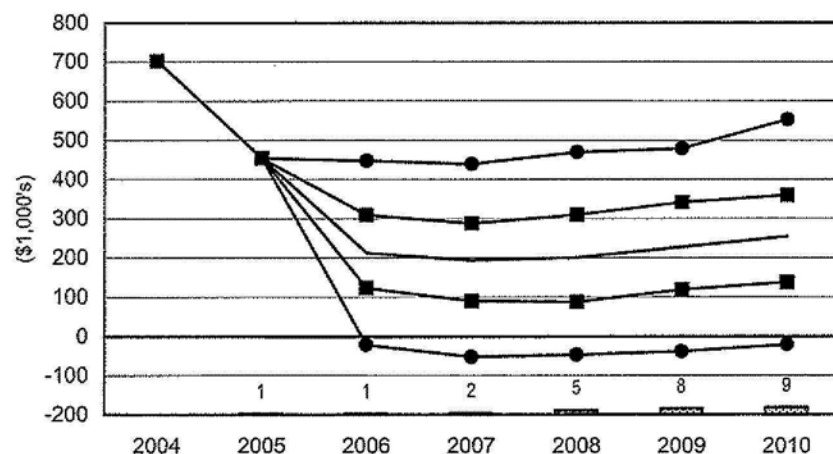
**Figure 35. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**

— Average NCFI ■ 25 & 75 Percentile NCFI ● 5 & 95 Percentile NCFI ▨ Prob. of Cash Flow Deficit

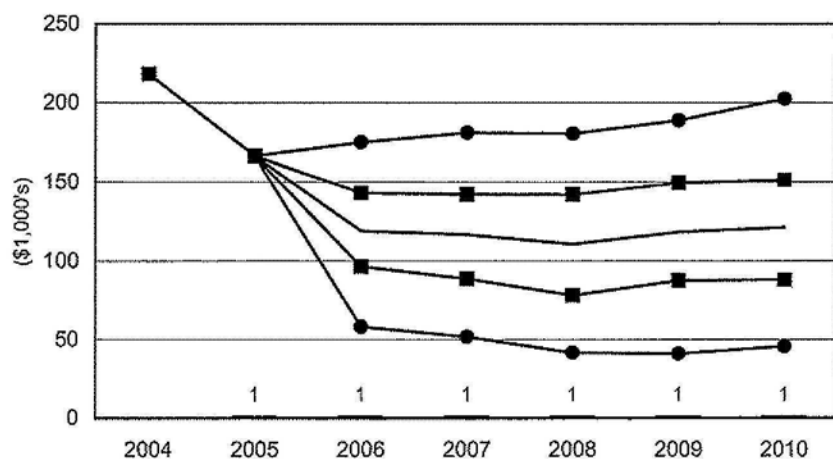
NYCD110 Central New York Dairy Farm



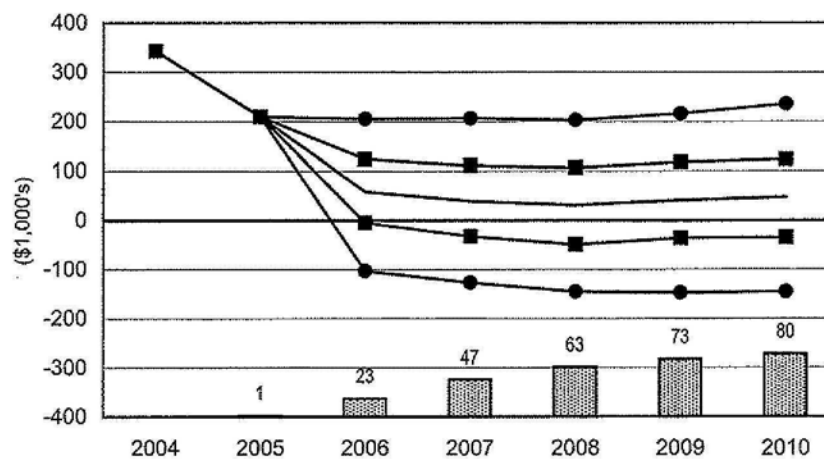
NYCD500 Large Central New York Dairy Farm



VTD134 Vermont Dairy Farm



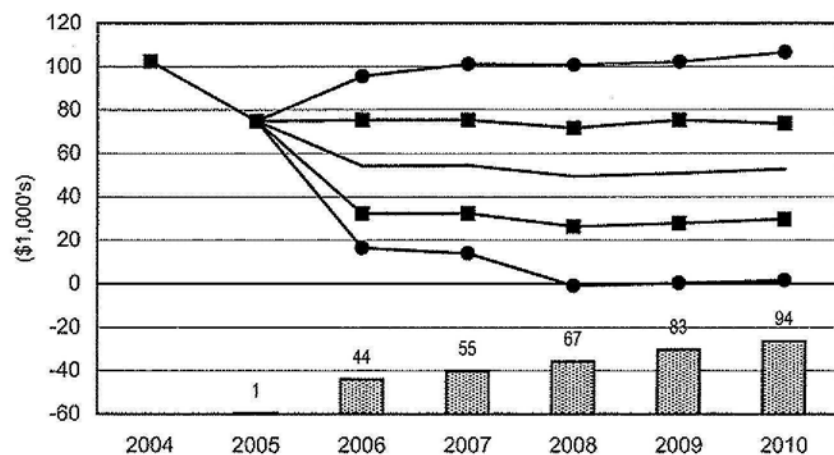
VTD350 Large Vermont Dairy Farm



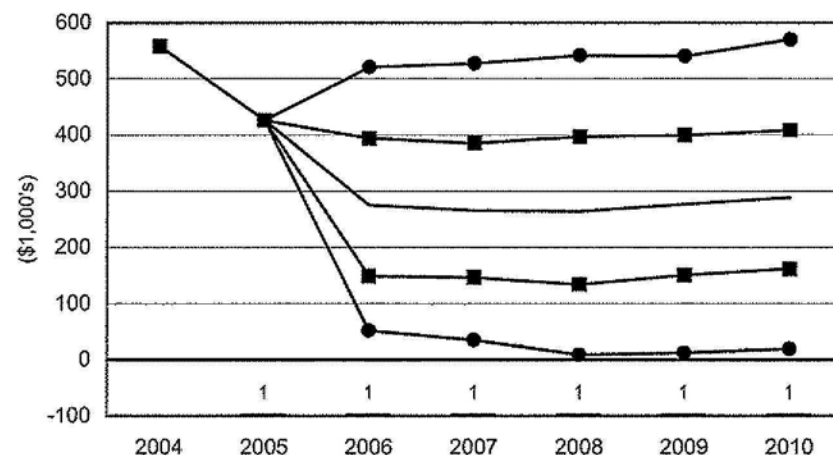
**Figure 36. Net Cash Farm Income and Probabilities of a Cash Flow Deficit:
Dairy Farms**

— Average NCFI ■ 25 & 75 Percentile NCFI ● 5 & 95 Percentile NCFI ▨ Prob. of Cash Flow Deficit

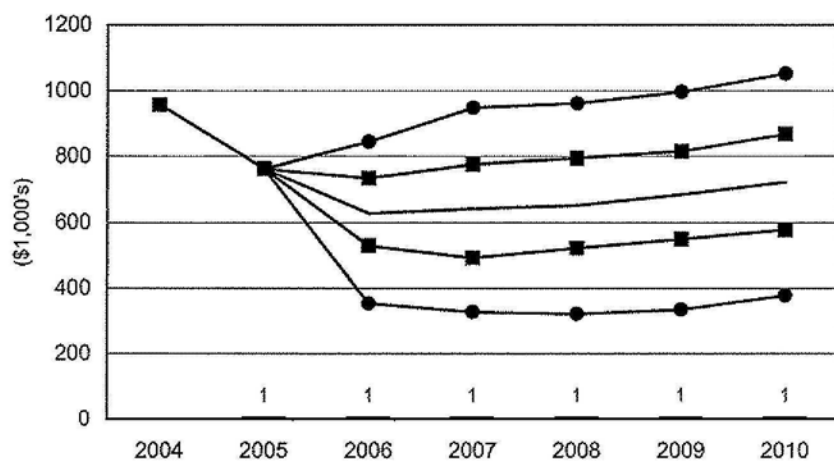
MOD85 Missouri Dairy Farm



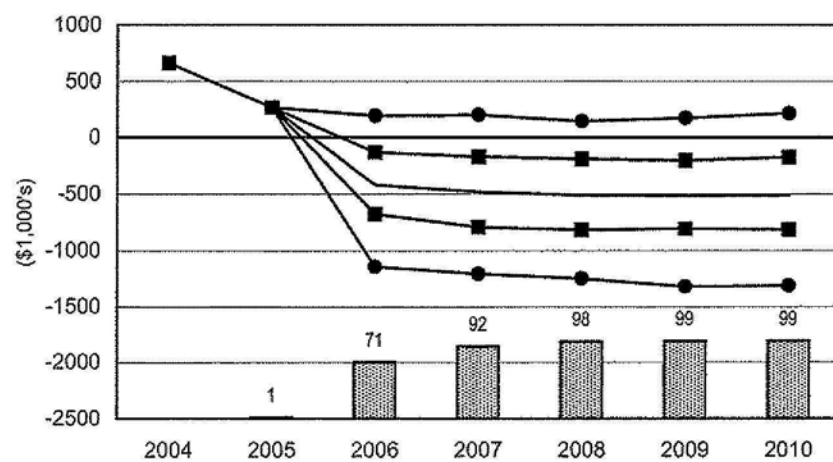
MOD400 Large Missouri Dairy Farm



FLND550 Northern Florida Dairy Farm



FLSD1500 Southern Florida Dairy Farm





Dairy Programs

AMS USDA SEARCH

Milk Marketing Order Statistics

Federal Milk Order Price Information

Price Formulas - 2000

Note: Milk prices are per 100 pounds or cwt., rounded to the nearest cent. Component prices are per pound, rounded to nearest one-hundredth cent. Cheese, dry whey, butter, and nonfat dry milk prices are weighted averages of weekly NASS survey prices.

Class I:

Class I Price = (Class I skim milk price x 0.965) + (Class I butterfat price x 3.5).

Class I Skim Milk Price = Higher of advanced Class III or IV skim milk pricing factors + applicable Class I differential.

Class I Butterfat Price = Advanced butterfat pricing factor + (applicable Class I differential divided by 100).

Note: Advanced pricing factors are computed using applicable price formulas listed below, except that product price averages are for two weeks.

Class II:

Class II Price = (Class II skim milk price x 0.965) + (Class II butterfat price x 3.5).

Class II Skim Milk Price = Advanced Class IV skim milk pricing factor + \$0.70.

Class II Butterfat Price = Butterfat price + \$0.007.

Class II Nonfat Solids Price = Class II skim milk price divided by 9.

Class III:

Class III Price = (Class III skim milk price x 0.965) + (Butterfat price x 3.5).

Class III Skim Milk Price = (Protein price x 3.1) + (Other solids price x 5.9).

Protein Price = ((Cheese price - 0.1702) x 1.405) + (((Cheese price - 0.1702) x 1.582) - Butterfat price) x 1.28).

Other Solids Price = (Dry whey price - 0.137) divided by 0.968.

Butterfat Price = (Butter price - 0.114) divided by 0.82.

Class IV:

Class IV Price = (Class IV skim milk price x 0.965) + (Butterfat price x 3.5).

Class IV Skim Milk Price = Nonfat solids price x 9.

Nonfat Solids Price = (Nonfat dry milk price - 0.137) divided by 1.02.

Butterfat Price = See Class III.

Producer Prices:

Butterfat Price = See Class III.

Protein Price = See Class III.

Others solids Price = See Class III.

Somatic Cell Adjustment Rate = Cheese price x 0.0005, rounded to fifth decimal place. Rate is per 1,000 somatic cell count.

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Milk Marketing Order Statistics

Federal Milk Order Price Information

Price Formulas - 2001

Note: Milk prices are per 100 pounds or cwt., rounded to the nearest cent.
 Component prices are per pound, rounded to nearest one-hundredth cent.
 Cheese, dry whey, butter, and nonfat dry milk prices are weighted monthly averages of weekly NASS survey prices, rounded to the nearest one-hundredth cent.

Class I: (January and February)

Class I Base Price (3.5%) = Higher of advanced Class III or IV pricing factors.

Base Skim Milk Price for Class I = Advanced skim milk pricing factor used to compute the Class I base price.

Base Butterfat Price for Class I = Advanced butterfat pricing factor used to compute the Class I base price.

Class I Price = Class I base price + applicable Class I differential.

Class I Butterfat Price = Base butterfat price for Class I + (applicable Class I differential divided by 100).

Class I: (March to date)

Class I Price = (Class I skim milk price x 0.965) + (Class I butterfat price x 3.5).

Class I Skim Milk Price = Higher of advanced Class III or IV skim milk pricing factors + applicable Class I differential.

Class I Butterfat Price = Advanced butterfat pricing factor + (applicable Class I differential divided by 100).

Note: Advanced pricing factors are computed using applicable price formulas listed below, except that product price averages are for two weeks.

Class II:

Class II Price = (Class II skim milk price x 0.965) + (Class II butterfat price x 3.5).

Class II Skim Milk Price = Advanced Class IV skim milk pricing factor + \$0.70.

Class II Butterfat Price = Butterfat price + \$0.007.

Class II Nonfat Solids Price = Class II skim milk price divided by 9.

Class III:

Class III Price = (Class III skim milk price x 0.965) + (Butterfat price x 3.5).

Class III Skim Milk Price = (Protein price x 3.1) + (Other solids price x 5.9).

Protein Price (Jan./Feb. Advance Prices only.) = (Cheese price - 0.165) x

1.405.

Protein Price = ((Cheese price - 0.165) x 1.405 + (((Cheese price - 0.165) x 1.582) - Butterfat price) x 1.28).

Other Solids Price = (Dry whey price - 0.14) divided by 0.968, snubbed at zero.

Class III Butterfat Price (Jan./Feb. Advance Prices only.) = (Cheese price - 0.165) x 1.582.

Butterfat Price = (Butter price - 0.115) divided by 0.82.

Class IV:

Class IV Price = (Class IV skim milk price x 0.965) + (Butterfat price x 3.5).

Class IV Skim Milk Price = Nonfat solids price x 9.

Nonfat Solids Price = Nonfat dry milk price - 0.14

Class IV Butterfat Price (Jan./Feb. Advance Prices only.) = (Butter price - 0.115) divided by 0.82.

Butterfat Price = See Class III.

Somatic Cell Adjustment Rate = Cheese price x 0.0005, rounded to fifth decimal place. Rate is per 1,000 somatic cell count difference from 350,000.

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Milk Marketing Order Statistics

Federal Milk Order Price Information

Price Formulas - 2002

Note: Milk prices are per 100 pounds or cwt., rounded to the nearest cent.
 Component prices are per pound, rounded to nearest one-hundredth cent.
 Cheese, dry whey, butter, and nonfat dry milk prices are weighted monthly averages of weekly NASS survey prices, rounded to the nearest one-hundredth cent.

Class I:

Class I Price = (Class I skim milk price x 0.965) + (Class I butterfat price x 3.5).

Class I Skim Milk Price = Higher of advanced Class III or IV skim milk pricing factors + applicable Class I differential.

Class I Butterfat Price = Advanced butterfat pricing factor + (applicable Class I differential divided by 100).

Note: Advanced pricing factors are computed using applicable price formulas listed below, except that product price averages are for two weeks.

Class II:

Class II Price = (Class II skim milk price x 0.965) + (Class II butterfat price x 3.5).

Class II Skim Milk Price = Advanced Class IV skim milk pricing factor + \$0.70.

Class II Butterfat Price = Butterfat price + \$0.007.

Class II Nonfat Solids Price = Class II skim milk price divided by 9.

Class III:

Class III Price = (Class III skim milk price x 0.965) + (Butterfat price x 3.5).

Class III Skim Milk Price = (Protein price x 3.1) + (Other solids price x 5.9).

Protein Price = ((Cheese price - 0.165) x 1.405 + (((Cheese price - 0.165) x 1.582) - Butterfat price) x 1.28).

Other Solids Price = (Dry whey price - 0.14) divided by 0.968, snubbed at zero.

Butterfat Price = (Butter price - 0.115) divided by 0.82.

Class IV:

Class IV Price = (Class IV skim milk price x 0.965) + (Butterfat price x 3.5).

Class IV Skim Milk Price = Nonfat solids price x 9.

Nonfat Solids Price = Nonfat dry milk price - 0.14

Butterfat Price = See Class III.

Somatic Cell Adjustment Rate = Cheese price x 0.0005, rounded to fifth decimal place. Rate is per 1,000 somatic cell count difference from 350,000.

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Milk Marketing Order Statistics

Federal Milk Order Price Information

Price Formulas - 2003

For January - March prices, see Price Formulas for 2002.

For April - December prices, see below.

Note: Milk prices are per 100 pounds or cwt., rounded to the nearest cent.
 Component prices are per pound, rounded to nearest one-hundredth cent.
 Cheese, dry whey, butter, and nonfat dry milk prices are weighted monthly averages of weekly NASS survey prices, rounded to the nearest one-hundredth cent.

Class I:

Class I Price = (Class I skim milk price x 0.965) + (Class I butterfat price x 3.5).

Class I Skim Milk Price = Higher of advanced Class III or IV skim milk pricing factors + applicable Class I differential.

Class I Butterfat Price = Advanced butterfat pricing factor+ (applicable Class I differential divided by 100).

Note: Advanced pricing factors are computed using applicable price formulas listed below, except that product price averages are for two weeks.

Class II:

Class II Price = (Class II skim milk price x 0.965) + (Class II butterfat price x 3.5).

Class II Skim Milk Price = Advanced Class IV skim milk pricing factor + \$0.70.

Class II Butterfat Price = Butterfat price + \$0.007.

Class II Nonfat Solids Price = Class II skim milk price divided by 9.

Class III:

Class III Price = (Class III skim milk price x 0.965) + (Butterfat price x 3.5).

Class III Skim Milk Price = (Protein price x 3.1) + (Other solids price x 5.9).

Protein Price = ((Cheese price - 0.165) x 1.383) + (((Cheese price - 0.165) x 1.572) - Butterfat price x 0.9) x 1.17).

Other Solids Price = (Dry whey price - 0.159) times 1.03.

Butterfat Price = (Butter price - 0.115) times 1.20.

Class IV:

Class IV Price = (Class IV skim milk price x 0.965) + (Butterfat price x 3.5).

Class IV Skim Milk Price = Nonfat solids price times 9.

Nonfat Solids Price = (Nonfat dry milk price - 0.14) times 0.99.

Butterfat Price = See Class III.

Somatic Cell Adjustment Rate = Cheese price x 0.0005, rounded to fifth decimal place. Rate is per 1,000 somatic cell count difference from 350,000.

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Milk Marketing Order Statistics

Federal Milk Order Price Information

Price Formulas - 2004

Note: Milk prices are per 100 pounds or cwt., rounded to the nearest cent.
 Component prices are per pound, rounded to nearest one-hundredth cent.
 Cheese, dry whey, butter, and nonfat dry milk prices are weighted monthly averages of weekly NASS survey prices, rounded to the nearest one-hundredth cent.

Class I:

Class I Price = (Class I skim milk price x 0.965) + (Class I butterfat price x 3.5).

Class I Skim Milk Price = Higher of advanced Class III or IV skim milk pricing factors + applicable Class I differential.

Class I Butterfat Price = Advanced butterfat pricing factor + (applicable Class I differential divided by 100).

Note: Advanced pricing factors are computed using applicable price formulas listed below, except that product price averages are for two weeks.

Class II:

Class II Price = (Class II skim milk price x 0.965) + (Class II butterfat price x 3.5).

Class II Skim Milk Price = Advanced Class IV skim milk pricing factor + \$0.70.

Class II Butterfat Price = Butterfat price + \$0.007.

Class II Nonfat Solids Price = Class II skim milk price divided by 9.

Class III:

Class III Price = (Class III skim milk price x 0.965) + (Butterfat price x 3.5).

Class III Skim Milk Price = (Protein price x 3.1) + (Other solids price x 5.9).

Protein Price = ((Cheese price - 0.165) x 1.383) + (((Cheese price - 0.165) x 1.572) - Butterfat price x 0.9) x 1.17).

Other Solids Price = (Dry whey price - 0.159) times 1.03.

Butterfat Price = (Butter price - 0.115) times 1.20.

Class IV:

Class IV Price = (Class IV skim milk price x 0.965) + (Butterfat price x 3.5).

Class IV Skim Milk Price = Nonfat solids price times 9.

Nonfat Solids Price = (Nonfat dry milk price - 0.14) times 0.99.

Butterfat Price = See Class III.

Somatic Cell Adjustment Rate = Cheese price x 0.0005, rounded to fifth decimal place. Rate is per 1,000 somatic cell count difference from 350,000.

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Milk Marketing Order Statistics

Federal Milk Order Price Information

Price Formulas - 2005

Note: Milk prices are per 100 pounds or cwt., rounded to the nearest cent.
 Component prices are per pound, rounded to nearest one-hundredth cent.
 Cheese, dry whey, butter, and nonfat dry milk prices are weighted monthly averages of weekly NASS survey prices, rounded to the nearest one-hundredth cent.

Class I:

Class I Price = (Class I skim milk price x 0.965) + (Class I butterfat price x 3.5).

Class I Skim Milk Price = Higher of advanced Class III or IV skim milk pricing factors + applicable Class I differential.

Class I Butterfat Price = Advanced butterfat pricing factor+ (applicable Class I differential divided by 100).

Note: Advanced pricing factors are computed using applicable price formulas listed below, except that product price averages are for two weeks.

Class II:

Class II Price = (Class II skim milk price x 0.965) + (Class II butterfat price x 3.5).

Class II Skim Milk Price = Advanced Class IV skim milk pricing factor + \$0.70.

Class II Butterfat Price = Butterfat price + \$0.007.

Class II Nonfat Solids Price = Class II skim milk price divided by 9.

Class III:

Class III Price = (Class III skim milk price x 0.965) + (Butterfat price x 3.5).

Class III Skim Milk Price = (Protein price x 3.1) + (Other solids price x 5.9).

Protein Price = ((Cheese price - 0.165) x 1.383) + (((Cheese price - 0.165) x 1.572) - Butterfat price x 0.9) x 1.17).

Other Solids Price = (Dry whey price - 0.159) times 1.03.

Butterfat Price = (Butter price - 0.115) times 1.20.

Class IV:

Class IV Price = (Class IV skim milk price x 0.965) + (Butterfat price x 3.5).

Class IV Skim Milk Price = Nonfat solids price times 9.

Nonfat Solids Price = (Nonfat dry milk price - 0.14) times 0.99.

Butterfat Price = See Class III.

Somatic Cell Adjustment Rate = Cheese price x 0.0005, rounded to fifth decimal place. Rate is per 1,000 somatic cell count difference from 350,000.

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Milk Marketing Order Statistics

Federal Milk Order Price Information

Price Formulas - 2006

Note: Milk prices are per 100 pounds or cwt., rounded to the nearest cent.
 Component prices are per pound, rounded to nearest one-hundredth cent.
 Cheese, dry whey, butter, and nonfat dry milk prices are weighted monthly averages of weekly NASS survey prices, rounded to the nearest one-hundredth cent.

Class I:

Class I Price = (Class I skim milk price x 0.965) + (Class I butterfat price x 3.5).

Class I Skim Milk Price = Higher of advanced Class III or IV skim milk pricing factors + applicable Class I differential.

Class I Butterfat Price = Advanced butterfat pricing factor+ (applicable Class I differential divided by 100).

Note: Advanced pricing factors are computed using applicable price formulas listed below, except that product price averages are for two weeks.

Class II:

Class II Price = (Class II skim milk price x 0.965) + (Class II butterfat price x 3.5).

Class II Skim Milk Price = Advanced Class IV skim milk pricing factor + \$0.70.

Class II Butterfat Price = Butterfat price + \$0.007.

Class II Nonfat Solids Price = Class II skim milk price divided by 9.

Class III:

Class III Price = (Class III skim milk price x 0.965) + (Butterfat price x 3.5).

Class III Skim Milk Price = (Protein price x 3.1) + (Other solids price x 5.9).

Protein Price = ((Cheese price - 0.165) x 1.383) + (((Cheese price - 0.165) x 1.572) - Butterfat price x 0.9) x 1.17).

Other Solids Price = (Dry whey price - 0.159) times 1.03.

Butterfat Price = (Butter price - 0.115) times 1.20.

Class IV:

Class IV Price = (Class IV skim milk price x 0.965) + (Butterfat price x 3.5).

Class IV Skim Milk Price = Nonfat solids price times 9.

Nonfat Solids Price = (Nonfat dry milk price - 0.14) times 0.99.

Butterfat Price = See Class III.

Somatic Cell Adjustment Rate = Cheese price x 0.0005, rounded to fifth decimal place. Rate is per 1,000 somatic cell count difference from 350,000.

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Milk Marketing Order Statistics

Federal Milk Order Price Information

Price Formulas - 2007

Note: Milk prices are per 100 pounds or cwt., rounded to the nearest cent.
 Component prices are per pound, rounded to nearest one-hundredth cent.
 Cheese, dry whey, butter, and nonfat dry milk prices are weighted monthly averages of weekly NASS survey prices, rounded to the nearest one-hundredth cent.

Class I:

Class I Price = (Class I skim milk price x 0.965) + (Class I butterfat price x 3.5).

Class I Skim Milk Price = Higher of advanced Class III or IV skim milk pricing factors + applicable Class I differential.

Class I Butterfat Price = Advanced butterfat pricing factor+ (applicable Class I differential divided by 100).

Note: Advanced pricing factors are computed using applicable price formulas listed below, except that product price averages are for two weeks.

Class II:

Class II Price = (Class II skim milk price x 0.965) + (Class II butterfat price x 3.5).

Class II Skim Milk Price = Advanced Class IV skim milk pricing factor + \$0.70.

Class II Butterfat Price = Butterfat price + \$0.007.

Class II Nonfat Solids Price = Class II skim milk price divided by 9.

Class III:

Class III Price = (Class III skim milk price x 0.965) + (Butterfat price x 3.5).

Class III Skim Milk Price = (Protein price x 3.1) + (Other solids price x 5.9).

Protein Price (Jan./Feb. Advance Prices & Jan. Class and Component Prices only) = ((Cheese price - 0.165) x 1.383) + (((Cheese price - 0.165) x 1.572) - Butterfat price x 0.9) x 1.17).

Protein Price = ((Cheese price - 0.1682) x 1.383) + (((Cheese price - 0.1682) x 1.572) - Butterfat price x 0.9) x 1.17).

Other Solids Price (Jan./Feb. Advance Prices & Jan. Class and Component Prices only) = (Dry whey price - 0.159) times 1.03.

Other Solids Price = (Dry whey price - 0.1956) times 1.03.

Butterfat Price (Jan./Feb. Advance Prices & Jan. Class and Component Prices only) = (Butter price - 0.115) times 1.20.

Butterfat Price = (Butter price - 0.1202) times 1.20.

Class IV:

Class IV Price = (Class IV skim milk price x 0.965) + (Butterfat price x 3.5).

Class IV Skim Milk Price = Nonfat solids price times 9.

Nonfat Solids Price (Jan./Feb. Advance Prices & Jan. Class and Component Prices only) = (Nonfat dry milk price - 0.14) times 0.99.

Nonfat Solids Price = (Nonfat dry milk price - 0.157) times 0.99.

Butterfat Price = See Class III.

Somatic Cell Adjustment Rate = Cheese price x 0.0005, rounded to fifth decimal place. Rate is per 1,000 somatic cell count difference from 350,000.

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Table 30—NASS Dairy Product Price Averages Used in Federal Milk Order Price Formulas, 2006 ^{1/}

Year and Month	Product Price Averages For:									
	Class I (Skim, Bfat.), Class II (Skim, Nonfat Solids)					Class II (Bfat.), Class III, Class IV, Components				
	Weeks ending	Butter	Nonfat dry milk	Cheese	Dry Whey	Weeks ending	Butter	Nonfat dry milk	Cheese	Dry Whey
2006										
Jan	12/10,17	1.3663	1.0018	1.3979	0.3244	12/31, 1/7,14,21,28	1.3387	0.9614	1.3895	0.3416
Feb	1/7,14	1.3459	0.9782	1.3895	0.3394	2/4,11,18,25	1.2374	0.8833	1.2637	0.3531
Mar	2/4,11	1.2623	0.9053	1.2923	0.3532	3/4,11,18,25	1.1647	0.8697	1.1612	0.3409
Apr	3/4,11	1.1746	0.8789	1.1686	0.3478	4/1,8,15,22,29	1.1436	0.8429	1.1654	0.3054
May	4/8,15	1.1426	0.8400	1.1698	0.3056	5/6,13,20,27	1.1635	0.8288	1.1694	0.2805
Jun	5/6,13	1.1658	0.8309	1.1602	0.2811	6/3,10,17,24	1.1513	0.8221	1.2166	0.2808
Jul	6/10,17	1.1508	0.8205	1.2218	0.2817	7/1,8,15,22,29	1.1340	0.8300	1.1793	0.2810
Aug	7/8,15	1.1278	0.8268	1.1858	0.2796	8/5,12,19,26	1.1990	0.8484	1.1813	0.2965
Sep	8/5,12	1.1736	0.8463	1.1633	0.2925	9/2,9,16,23	1.2976	0.8537	1.2912	0.3191
Oct	9/9,16	1.2989	0.8542	1.3063	0.3162	9/30, 10/7,14,21,28	1.2941	0.9027	1.2721	0.3557
Nov	10/7,14	1.2820	0.8891	1.2846	0.3500	11/4,11,18,25	1.2693	0.9837	1.3123	0.3800
Dec	11/4,11	1.2625	0.9691	1.2745	0.3740	12/2,9,16,23,30	1.2384	1.0225	1.3624	0.4079
Avg.	—	1.2294	0.8868	1.2512	0.3205	---	1.2193	0.8874	1.2470	0.3285

^{1/} Figures are the average of the applicable weekly prices weighted by the sales volume for the week. See columns labeled "weeks ending" for applicable weeks. The most recently released information for the week is used. Averages are computed by the Agricultural Marketing Service.

Table 31—Federal Milk Order Class I and Class II Advanced Prices and Pricing Factors, 2006

Year and Month	Release Date	Class I Base Price ^{1/}	Base Skim Milk Price for Class I ^{2/}	Advanced Class III Skim Milk Pricing Factor	Advanced Class IV Skim Milk Pricing Factor	Advanced Butterfat Pricing Factor ^{3/}	Class II Skim Milk Price	Class II Nonfat Solids Price
		Dollars per cwt.				\$ per lb.	\$ per cwt.	\$ per lb.
<u>2006</u>								
Jan	12/23/05	13.38	8.42	8.42	7.68	1.5016	8.38	0.9311
Feb	1/20/06	13.38	8.51	8.51	7.47	1.4771	8.17	0.9078
Mar	2/17	12.49	7.95	7.95	6.82	1.3768	7.52	0.8356
Apr	3/17	11.22	7.02	7.02	6.58	1.2715	7.28	0.8089
May	4/21	10.97	6.90	6.90	6.24	1.2331	6.94	0.7711
Jun	5/19	10.75	6.57	6.57	6.16	1.2610	6.86	0.7622
Jul	6/23	11.34	7.24	7.24	6.06	1.2430	6.76	0.7511
Aug	7/21	10.97	6.96	6.96	6.12	1.2154	6.82	0.7578
Sep	8/18	10.85	6.64	6.64	6.29	1.2703	6.99	0.7767
Oct	9/22	12.42	7.72	7.72	6.36	1.4207	7.06	0.7844
Nov	10/20	12.40	7.77	7.77	6.67	1.4004	7.37	0.8189
Dec	11/17	12.43	7.89	7.89	7.39	1.3770	8.09	0.8989
Avg.	—	11.88	7.47	7.47	6.65	1.3373	7.35	0.8170

^{1/} This price is shown for informational purposes only; it is not defined in Section 1000.50 of the order. It equals (the base skim milk price for Class I times 0.965) plus (the advanced butterfat pricing factor times 3.5).

^{2/} The higher of the advanced Class III or IV skim milk pricing factors. The Class I skim milk prices equals this price plus the applicable Class I differential.

^{3/} The Class I butterfat price equals this price plus the (applicable Class I differential divided by 100).

Table 32--Federal Milk Order Class II, Class III, and Class IV Milk and Component Prices, 2006

Year and Month	Release Date	Class II Price 1/	Class II Butterfat Price	Class III Price	Class III Skim Milk Price	Class IV Price	Class IV Skim Milk Price	Butterfat Price 2/ 3/	Nonfat Solids Price	Protein Price 3/	Other Solids Price 3/	Somatic Cell Adjust-ment Rate 4/
		\$/cwt.	\$/lb.	Dollars per cwt.				Dollars per pound				\$/count
<u>2006</u>												
Jan	2/3	13.25	1.4754	13.39	8.55	12.20	7.32	1.4684	0.8132	2.3994	0.1881	0.00069
Feb	3/3	12.62	1.3539	12.20	7.76	11.10	6.62	1.3469	0.7359	2.1220	0.1999	0.00063
Mar	3/31	11.69	1.2666	11.11	6.94	10.68	6.50	1.2596	0.7224	1.8836	0.1874	0.00058
Apr	5/5	11.37	1.2413	10.93	6.85	10.36	6.26	1.2343	0.6959	1.9238	0.1508	0.00058
May	6/2	11.13	1.2652	10.83	6.66	10.33	6.14	1.2582	0.6819	1.9115	0.1251	0.00058
Jun	6/30	11.00	1.2506	11.29	7.19	10.22	6.08	1.2436	0.6753	2.0790	0.1255	0.00061
Jul	8/4	10.83	1.2298	10.92	6.88	10.21	6.15	1.2228	0.6831	1.9807	0.1257	0.00059
Aug	9/1	11.16	1.3078	11.06	6.74	10.64	6.31	1.3008	0.7013	1.9050	0.1416	0.00059
Sep	9/29	11.74	1.4261	12.29	7.59	11.10	6.36	1.4191	0.7066	2.1346	0.1649	0.00065
Oct	11/3	11.79	1.4219	12.32	7.64	11.51	6.80	1.4149	0.7551	2.0775	0.2026	0.00064
Nov	12/1	11.98	1.3922	12.84	8.28	12.11	7.52	1.3852	0.8353	2.2383	0.2276	0.00066
Dec	1/5	12.55	1.3551	13.47	9.07	12.30	7.86	1.3481	0.8737	2.4388	0.2564	0.00068
Avg	---	11.76	1.3322	11.89	7.51	11.06	6.66	1.3252	0.7400	2.0912	0.1746	0.00062

1/ See Table 31--Federal Milk Order Class I and Class II Advanced Prices and Pricing Factors, for Class II skim milk prices.

2/ Butterfat price for both Class III and IV.

3/ Producer component prices; applicable to orders 1, 30, 32, 33, 124, and 126.

4/ Adjustment to producer payment in component pricing orders with this provision. Rate is per 1,000 somatic cell count difference from 350,000. Somatic cell counts below 350,000 result in a positive adjustment and a higher payment. Counts above 350,000 result in a lower payment.

Table 33—Federal Milk Order Principal Pricing Points, with Class I Differentials

Federal Milk Order	Principal Pricing Point	Major City in Principal Pricing Point	Class I Differential for:	
			Principal Pricing Point	Other Major Cities in the Order
Northeast	Suffolk Co., MA	Boston	\$3.25	New York City, \$3.15; Philadelphia, \$3.05; Baltimore, \$3.00; and Washington, DC, \$3.00
Appalachian	Mecklenburg Co., NC	Charlotte	\$3.10	Knoxville, \$2.80 and Louisville, \$2.20.
Southeast	Fulton Co., GA	Atlanta	\$3.10	New Orleans; \$3.60; Memphis, \$2.80; Nashville, \$2.60; and Springfield, MO., \$2.20
Florida	Hillsborough Co., FL	Tampa	\$4.00	Orlando, \$4.00 Miami, \$4.30; and Jacksonville, \$3.70.
Mideast	Cuyahoga Co., OH	Cleveland	\$2.00	Indianapolis, \$2.00; Cincinnati, \$2.20; Pittsburgh, \$2.10; and Detroit, \$1.80
Upper Midwest	Cook Co., IL	Chicago	\$1.80	Milwaukee, \$1.75; and Minneapolis, \$1.70.
Central	Jackson Co., MO	Kansas City	\$2.00	Des Moines, \$1.80; Omaha, \$1.85; Oklahoma City, \$2.60; St. Louis, \$2.00, and Denver, \$2.55.
Southwest	Dallas Co., TX	Dallas	\$3.00	Houston, \$3.60; San Antonio, \$3.45; Albuquerque, \$2.35; and El Paso, \$2.25
Arizona 1/	Maricopa Co., AZ	Phoenix	\$2.35	Las Vegas, \$2.00. (Effective May 1, 2006, no longer part of the marketing area.)
Pacific Northwest	King Co., WA	Seattle	\$1.90	Portland, \$1.90; and Spokane, \$1.90.

Table 34—Class I Skim Milk Price, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Dollars per Hundredweight														
Northeast	001	11.67	11.76	11.20	10.27	10.15	9.82	10.49	10.21	9.89	10.97	11.02	11.14	10.72
Appalachian	005	11.52	11.61	11.05	10.12	10.00	9.67	10.34	10.06	9.74	10.82	10.87	10.99	10.57
Southeast	007	11.52	11.61	11.05	10.12	10.00	9.67	10.34	10.06	9.74	10.82	10.87	10.99	10.57
Florida	006	12.42	12.51	11.95	11.02	10.90	10.57	11.24	10.96	10.64	11.72	11.77	11.89	11.49
Midwest	033	10.42	10.51	9.95	9.02	8.90	8.57	9.24	8.96	8.64	9.72	9.77	9.89	9.48
Upper Midwest	030	10.22	10.31	9.75	8.82	8.70	8.37	9.04	8.76	8.44	9.52	9.57	9.69	9.27
Central	032	10.42	10.51	9.95	9.02	8.90	8.57	9.24	8.96	8.64	9.72	9.77	9.89	9.48
Southwest	126	11.42	11.51	10.95	10.02	9.90	9.57	10.24	9.96	9.64	10.72	10.77	10.89	10.47
Arizona 2/	131	10.77	10.86	10.30	9.37	9.25	8.92	9.59	9.31	8.99	10.07	10.12	10.24	9.77
Pacific Northwest	124	10.32	10.41	9.85	8.92	8.80	8.47	9.14	8.86	8.54	9.62	9.67	9.79	9.36
All Markets Combined		11.13	11.22	10.66	9.73	9.60	9.28	9.95	9.66	9.33	10.41	10.46	10.59	10.17

1/ See Table 33 for principal pricing points of markets. All averages are weighted using the applicable pounds of skim milk in producer milk used in Class I products.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 35--Class I Butterfat Price, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Dollars per Pound														
Northeast	001	1.5341	1.5096	1.4093	1.3040	1.2656	1.2935	1.2755	1.2479	1.3028	1.4532	1.4329	1.4095	1.3713
Appalachian	005	1.5326	1.5081	1.4078	1.3025	1.2641	1.2920	1.2740	1.2464	1.3013	1.4517	1.4314	1.4080	1.3692
Southeast	007	1.5326	1.5081	1.4078	1.3025	1.2641	1.2920	1.2740	1.2464	1.3013	1.4517	1.4314	1.4080	1.3682
Florida	006	1.5416	1.5171	1.4168	1.3115	1.2731	1.3010	1.2830	1.2554	1.3103	1.4607	1.4404	1.4170	1.3791
Mideast	033	1.5216	1.4971	1.3968	1.2915	1.2531	1.2810	1.2630	1.2354	1.2903	1.4407	1.4204	1.3970	1.3590
Upper Midwest	030	1.5196	1.4951	1.3948	1.2895	1.2511	1.2790	1.2610	1.2334	1.2883	1.4387	1.4184	1.3950	1.3562
Central	032	1.5216	1.4971	1.3968	1.2915	1.2531	1.2810	1.2630	1.2354	1.2903	1.4407	1.4204	1.3970	1.3592
Southwest	126	1.5300	1.5100	1.4100	1.3000	1.2600	1.2900	1.2700	1.2500	1.3000	1.4500	1.4300	1.4100	1.3679
Arizona 2/	131	1.5251	1.5006	1.4003	1.2950	1.2566	1.2845	1.2665	1.2389	1.2938	1.4442	1.4239	1.4005	1.3531
Pacific Northwest	124	1.5206	1.4961	1.3958	1.2905	1.2521	1.2800	1.2620	1.2344	1.2893	1.4397	1.4194	1.3960	1.3566
All Markets Combined		1.5291	1.5050	1.4048	1.2990	1.2603	1.2885	1.2703	1.2434	1.2977	1.4481	1.4278	1.4048	1.3657

1/ See Table 33 for principal pricing points of markets. All averages are weighted using the applicable pounds of butterfat in producer milk used in Class I products.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 36--Class I Milk Price, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Dollars per Hundredweight														
Northeast	001	16.63	16.63	15.74	14.47	14.22	14.00	14.59	14.22	14.10	15.67	15.65	15.68	15.14
Appalachian	005	16.48	16.48	15.59	14.32	14.07	13.85	14.44	14.07	13.95	15.52	15.50	15.53	15.00
Southeast	007	16.48	16.48	15.59	14.32	14.07	13.85	14.44	14.07	13.95	15.52	15.50	15.53	14.99
Florida	006	17.38	17.38	16.49	15.22	14.97	14.75	15.34	14.97	14.85	16.42	16.40	16.43	15.91
Midcast	033	15.38	15.38	14.49	13.22	12.97	12.75	13.34	12.97	12.85	14.42	14.40	14.43	13.90
Upper Midwest	030	15.18	15.18	14.29	13.02	12.77	12.55	13.14	12.77	12.65	14.22	14.20	14.23	13.69
Central	032	15.38	15.38	14.49	13.22	12.97	12.75	13.34	12.97	12.85	14.42	14.40	14.43	13.90
Southwest	126	16.38	16.38	15.49	14.22	13.97	13.75	14.34	13.97	13.85	15.42	15.40	15.43	14.89
Arizona 2/	131	15.73	15.73	14.84	13.57	13.32	13.10	13.69	13.32	13.20	14.77	14.75	14.78	14.17
Pacific Northwest	124	15.28	15.28	14.39	13.12	12.87	12.65	13.24	12.87	12.75	14.32	14.30	14.33	13.78
All Markets Combined		16.09	16.09	15.20	13.93	13.67	13.46	14.05	13.67	13.54	15.11	15.09	15.13	14.59

1/ See Table 33 for principal pricing points of markets. All averages are weighted using the applicable pounds of milk in producer milk used in Class I products.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 5--Number of Producers Delivering Milk to Handlers Regulated Under Federal Orders, by Marketing Area, 2006

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SIMPLE AVERAGE
Northeast	001	14,551	14,441	14,457	14,412	14,326	14,319	14,356	14,222	14,119	14,059	14,057	14,093	14,284
Appalachian	005	3,055	3,049	3,087	3,146	3,207	3,184	3,191	3,287	3,158	3,161	3,190	3,141	3,155
Southeast	007	3,408	3,292	3,404	3,323	3,349	3,345	3,298	3,295	3,186	3,160	3,198	3,209	3,289
Florida	006	378	313	315	313	323	271	324	347	343	356	350	338	331
Midwest	033	8,757	8,633	8,713	8,710	8,629	8,612	8,472	8,048	8,065	7,875	7,984	7,932	8,369
Upper Midwest	030	16,432	16,424	16,541	16,479	16,291	16,406	16,609	17,293	14,892	17,019	17,155	16,785	16,527
Central	032	5,471	5,394	5,448	5,480	5,386	5,117	5,331	5,194	4,798	4,989	4,407	4,427	5,120
Southwest	126	835	853	825	792	863	830	873	685	660	671	661	765	776
Arizona 1/	131	86	87	86	85	93	94	97	95	92	93	94	93	91
Pacific Northwest	124	843	838	835	837	840	833	824	821	607	772	769	572	783
All Markets Combined		53,816	53,326	53,711	53,577	53,307	53,011	53,375	53,287	49,920	52,155	51,865	51,355	52,725

1/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 6--Receipts of Producer Milk by Handlers Regulated Under Federal Orders, by Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Million Pounds														
Northeast	001	1,986	1,834	2,064	2,003	2,071	1,901	1,906	1,810	1,746	1,777	1,737	1,844	22,680
Appalachian	005	520	490	576	575	586	544	490	480	456	501	502	523	6,243
Southeast	007	773	673	763	744	727	678	603	634	607	628	614	610	8,055
Florida	006	279	262	300	279	271	251	244	243	232	250	251	265	3,126
Midwest 2/	033	1,512	1,390	1,544	1,513	1,578	1,501	1,502	1,360	1,260	1,349	1,307	1,374	17,189
Upper Midwest 3/	030	2,217	2,057	2,271	2,188	2,269	2,158	2,298	2,419	1,937	2,394	2,369	2,277	26,855
Central 4/	032	1,245	1,226	1,381	1,332	1,400	1,021	1,314	1,184	807	1,142	961	903	13,917
Southwest 5/	126	900	890	1,002	944	1,083	991	1,051	939	879	916	927	1,077	11,600
Arizona 6/	131	269	253	288	302	325	306	276	260	250	274	277	302	3,383
Pacific Northwest 7/	124	627	606	678	688	717	662	707	726	488	620	597	454	7,570
All Markets Combined		10,329	9,680	10,867	10,568	11,028	10,014	10,391	10,056	8,662	9,850	9,543	9,630	120,618

1/ All Markets Combined and TOTAL may not add due to rounding.

2/ Handlers in this marketing area elected not to pool milk in September, November, and December due to disadvantageous class and uniform price relationships.

3/ Handlers in this marketing area elected not to pool milk in January-July and September-December due to disadvantageous class and uniform price relationships.

4/ Handlers in this marketing area elected not to pool milk in January, April-June, September, November, and December due to disadvantageous class and uniform price relationships.

5/ Handlers in this marketing area elected not to pool milk in June-August due to disadvantageous class and uniform price relationships.

6/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

7/ Handlers in this marketing area elected not to pool milk in September and December due to disadvantageous class and uniform price relationships.

Table 7--Average Daily Delivery of Milk Per Producer to Handlers Regulated Under Federal Orders, by Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SIMPLE AVERAGE
Pounds														
Northeast	001	4,403	4,535	4,605	4,633	4,662	4,426	4,283	4,105	4,123	4,078	4,119	4,221	4,349
Appalachian	005	5,496	5,737	6,020	6,088	5,898	5,696	4,950	4,715	4,810	5,109	5,248	5,370	5,428
Southeast	007	7,318	7,302	7,227	7,468	7,006	6,760	5,896	6,209	6,354	6,406	6,399	6,135	6,707
Florida	006	23,775	29,889	30,673	29,697	27,064	30,881	24,325	22,635	22,523	22,647	23,923	25,265	26,108
Midwest	033	5,571	5,749	5,715	5,792	5,899	5,809	5,718	5,452	5,206	5,525	5,458	5,586	5,623
Upper Midwest	030	4,352	4,473	4,430	4,427	4,493	4,384	4,463	4,512	4,336	4,537	4,604	4,377	4,449
Central	032	7,343	8,120	8,178	8,100	8,384	6,653	7,949	7,353	5,608	7,382	7,269	6,582	7,410
Southwest	126	34,786	37,160	39,180	39,720	40,496	39,796	38,825	44,210	44,395	44,054	46,765	45,418	41,234
Arizona 2/	131	100,755	104,029	108,191	118,454	112,884	108,481	91,897	88,412	90,544	94,960	98,183	104,860	101,804
Pacific Northwest	124	23,983	25,815	26,209	27,382	27,549	26,510	27,687	28,506	26,795	25,924	25,874	25,612	26,487
All Markets Combined 3/		6,191	6,483	6,527	6,575	6,674	6,297	6,280	6,087	5,784	6,092	6,133	6,049	6,264

1/ It should be noted that the election not to pool milk normally associated with an order due to disadvantageous intraorder price relationships affects the comparability of this statistic. See footnotes on Table 6.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

3/ Figures are computed from the "All Markets Combined" data for number of producers and receipts of producer milk from Tables 5 and 6.

Table 8--Butterfat Test of Producer Milk, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	3.79	3.78	3.77	3.71	3.67	3.62	3.58	3.58	3.68	3.78	3.79	3.77	3.71
Appalachian	005	3.75	3.74	3.69	3.63	3.60	3.55	3.54	3.56	3.65	3.75	3.79	3.76	3.67
Southeast	007	3.76	3.74	3.67	3.60	3.58	3.54	3.51	3.60	3.68	3.76	3.81	3.80	3.67
Florida	006	3.70	3.68	3.62	3.60	3.58	3.58	3.60	3.65	3.71	3.74	3.74	3.69	3.66
Mideast	033	3.76	3.75	3.75	3.69	3.64	3.59	3.56	3.56	3.66	3.78	3.79	3.75	3.69
Upper Midwest	030	3.78	3.78	3.76	3.72	3.68	3.61	3.57	3.56	3.70	3.82	3.84	3.81	3.72
Central	032	3.74	3.74	3.71	3.65	3.61	3.53	3.53	3.54	3.66	3.77	3.78	3.80	3.67
Southwest	126	3.81	3.79	3.73	3.66	3.60	3.55	3.56	3.59	3.67	3.72	3.77	3.80	3.69
Arizona 2/	131	3.67	3.60	3.59	3.52	3.50	3.50	3.51	3.51	3.61	3.66	3.68	3.74	3.59
Pacific Northwest	124	3.76	3.77	3.75	3.70	3.62	3.57	3.59	3.60	3.67	3.76	3.82	3.79	3.69
All Markets Combined		3.77	3.76	3.73	3.68	3.63	3.58	3.56	3.57	3.68	3.77	3.80	3.78	3.69

1/ Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of butterfat and producer milk pounds.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 9--Nonfat Solids Test of Producer Milk, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
		Percent												
Northeast	001	8.79	8.79	8.80	8.77	8.76	8.69	8.62	8.62	8.70	8.79	8.81	8.78	8.74
Mideast	033	8.79	8.79	8.79	8.74	8.72	8.67	8.64	8.64	8.74	8.82	8.81	8.78	8.74
Upper Midwest	030	8.77	8.81	8.78	8.74	8.74	8.68	8.65	8.68	8.78	8.84	8.84	8.80	8.76
Central	032	8.82	8.83	8.80	8.77	8.77	8.70	8.68	8.70	8.81	8.87	8.85	8.85	8.78
Southwest	126	8.81	8.81	8.76	8.69	8.74	8.70	8.67	8.68	8.79	8.82	8.86	8.86	8.77
Pacific Northwest	124	8.77	8.81	8.79	8.77	8.72	8.69	8.68	8.72	8.78	8.85	8.84	8.82	8.77
All Markets Combined		8.79	8.80	8.79	8.75	8.74	8.69	8.65	8.67	8.76	8.83	8.83	8.81	8.76

1/ Figures are shown for those orders for which the information is available; that is, the orders with the component pricing system for paying producers. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of nonfat solids and producer milk pounds.

Table 10--Protein (True) Test of Producer Milk, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	3.08	3.06	3.06	3.04	3.02	2.98	2.94	2.96	3.04	3.11	3.11	3.08	3.04
Midwest	033	3.07	3.06	3.05	3.01	2.99	2.96	2.94	2.95	3.05	3.12	3.12	3.10	3.03
Upper Midwest	030	3.06	3.08	3.05	3.02	3.00	2.96	2.92	2.95	3.06	3.12	3.12	3.10	3.04
Central	032	3.09	3.09	3.07	3.04	3.02	2.98	2.94	2.98	3.10	3.16	3.16	3.15	3.06
Southwest	126	3.10	3.09	3.05	2.99	3.00	2.97	2.97	2.98	3.07	3.15	3.20	3.19	3.06
Pacific Northwest	124	3.07	3.09	3.05	3.03	3.01	3.01	2.99	3.04	3.10	3.17	3.17	3.15	3.07
All Markets Combined		3.07	3.07	3.06	3.02	3.01	2.97	2.94	2.97	3.06	3.13	3.14	3.12	3.05

1/ Figures are shown for those orders for which the information is available; that is, the orders with the component pricing system for paying producers. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of true protein and producer milk pounds.

Table 11--Other Solids Test of Producer Milk, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
		Percent												
Northeast	001	5.71	5.73	5.73	5.73	5.74	5.71	5.68	5.66	5.66	5.68	5.70	5.70	5.70
Midwest	033	5.73	5.73	5.74	5.73	5.73	5.71	5.70	5.69	5.69	5.70	5.68	5.68	5.71
Upper Midwest	030	5.71	5.73	5.73	5.72	5.74	5.72	5.73	5.73	5.72	5.72	5.72	5.70	5.72
Central	032	5.73	5.74	5.73	5.72	5.75	5.73	5.74	5.73	5.71	5.71	5.69	5.71	5.73
Southwest	126	5.71	5.72	5.71	5.70	5.74	5.73	5.70	5.70	5.72	5.67	5.66	5.68	5.70
Pacific Northwest	124	5.70	5.72	5.74	5.75	5.72	5.68	5.69	5.68	5.68	5.68	5.67	5.67	5.70
All Markets Combined		5.72	5.73	5.73	5.72	5.74	5.71	5.71	5.70	5.69	5.70	5.69	5.69	5.71

1/ Figures are shown for those orders for which the information is available; that is, the orders with the component pricing system for paying producers. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of other solids and producer milk pounds.

Table 13--Utilization of Producer Milk in Class I Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Million Pounds														
Northeast	001	894	811	935	831	895	842	815	883	910	917	908	904	10,544
Appalachian	005	361	329	369	323	355	332	325	357	335	352	359	340	4,137
Southeast	007	418	375	413	377	396	382	374	423	403	413	400	400	4,774
Florida	006	238	216	242	221	218	208	207	215	205	211	221	225	2,627
Mideast	033	573	524	586	517	559	506	500	557	579	572	573	559	6,604
Upper Midwest	030	381	352	397	353	384	352	346	388	391	397	397	390	4,528
Central	032	387	345	387	345	361	342	331	374	371	381	372	374	4,370
Southwest	126	367	334	365	335	365	328	322	368	358	367	355	350	4,216
Arizona 2/	131	85	82	94	97	112	107	105	120	115	116	117	118	1,269
Pacific Northwest	124	187	163	186	178	194	185	171	189	191	198	198	196	2,235
All Markets Combined		3,890	3,531	3,974	3,577	3,839	3,583	3,497	3,874	3,857	3,924	3,899	3,857	45,304

1/ All Markets Combined and TOTAL may not add due to rounding.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 14--Class I Utilization Percentage of Producer Milk , by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	45.00	44.25	45.32	41.46	43.23	44.27	42.75	48.80	52.09	51.58	52.26	49.04	46.49
Appalachian	005	69.42	67.17	64.08	56.25	60.54	61.02	66.30	74.25	73.53	70.37	71.38	64.99	66.26
Southeast	007	54.02	55.64	54.11	50.67	54.48	56.35	62.10	66.62	66.34	65.88	65.22	65.53	59.27
Florida	006	85.43	82.33	80.77	79.12	80.43	82.84	84.85	88.32	88.52	84.60	87.86	85.11	84.03
Mideast	033	37.89	37.72	37.95	34.17	35.44	33.70	33.29	40.97	45.93	42.40	43.82	40.69	38.42
Upper Midwest	030	17.18	17.10	17.46	16.13	16.92	16.31	15.05	16.06	20.16	16.59	16.77	17.14	16.86
Central	032	31.07	28.16	28.03	25.90	25.81	33.45	25.23	31.57	45.97	33.36	38.66	41.38	31.40
Southwest	126	40.73	37.58	36.45	35.55	33.71	33.13	30.68	39.24	40.76	40.01	38.24	32.53	36.35
Arizona 2/	131	31.79	32.34	32.66	32.26	34.28	34.93	37.90	45.95	46.17	42.42	42.39	39.12	37.50
Pacific Northwest	124	29.76	26.87	27.38	25.84	27.04	27.89	24.24	26.11	39.05	31.85	33.19	43.16	29.52
All Markets Combined		37.66	36.48	36.57	33.85	34.81	35.78	33.65	38.53	44.53	39.84	40.86	40.05	37.56

1/ It should be noted that the election not to pool milk normally associated with an order due to a disadvantageous price relationship affects the comparability of this statistic. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of producer milk used in Class I and total producer milk.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 15--Butterfat Test of Producer Milk Used in Class I Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	1.96	1.96	1.97	1.96	1.94	1.95	1.98	1.99	1.94	2.01	2.07	2.06	1.98
Appalachian	005	2.01	2.01	2.00	2.01	2.03	2.10	2.10	2.05	2.01	2.04	2.10	2.16	2.05
Southeast	007	2.07	2.09	2.09	2.09	2.16	2.22	2.22	2.13	2.11	2.13	2.20	2.24	2.15
Florida	006	2.10	2.07	2.07	2.10	2.14	2.20	2.21	2.12	2.12	2.11	2.17	2.22	2.13
Mideast	033	1.82	1.82	1.82	1.81	1.82	1.87	1.86	1.84	1.82	1.84	1.88	1.91	1.84
Upper Midwest	030	1.50	1.49	1.49	1.48	1.49	1.54	1.54	1.53	1.50	1.51	1.55	1.57	1.51
Central	032	1.75	1.75	1.75	1.72	1.75	1.82	1.83	1.79	1.73	1.76	1.83	1.85	1.78
Southwest	126	2.20	2.18	2.24	2.18	2.21	2.34	2.33	2.22	2.18	2.18	2.28	2.34	2.24
Arizona 2/	131	1.87	1.87	1.87	1.99	2.00	2.11	2.09	2.02	2.01	2.04	2.05	2.09	2.01
Pacific Northwest	124	1.74	1.76	1.75	1.73	1.74	1.78	1.85	1.83	1.78	1.87	1.95	1.94	1.81
All Markets Combined		1.91	1.91	1.91	1.91	1.92	1.98	1.99	1.95	1.91	1.94	2.00	2.03	1.94

1/ Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of butterfat and producer milk pounds used in Class I.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 16—Nonfat Solids Test of Producer Milk Used in Class I Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
		Percent												
Northeast	001	8.96	8.96	8.96	8.99	8.93	8.85	8.77	8.76	8.86	8.95	8.97	8.94	8.91
Mideast	033	8.98	8.97	8.97	8.91	8.88	8.82	8.79	8.78	8.90	8.99	9.02	8.94	8.92
Upper Midwest	030	8.99	9.00	8.97	8.95	8.94	8.86	8.82	8.84	8.95	9.04	9.04	9.00	8.95
Central	032	9.04	9.05	9.02	8.96	8.95	8.87	8.84	8.86	8.99	9.06	9.06	9.05	8.98
Southwest	126	8.96	8.95	8.89	8.82	8.87	8.82	8.79	8.81	8.93	8.96	8.99	8.99	8.90
Pacific Northwest	124	8.96	8.98	8.97	8.94	8.88	8.85	8.81	8.85	8.95	9.01	9.00	8.99	8.93
All Markets Combined		8.98	8.98	8.96	8.94	8.91	8.85	8.79	8.80	8.91	8.99	9.01	8.97	8.93

1/ Figures are shown for those orders for which the information is available; that is, the orders with the component pricing system for paying producers. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of nonfat solids and producer milk pounds used in Class I.

Table 17--Utilization of Producer Milk in Class II Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Million Pounds														
Northeast	001	369	342	382	376	403	382	384	418	369	382	361	310	4,476
Appalachian	005	78	73	99	108	102	90	83	74	72	81	81	72	1,014
Southeast	007	83	74	86	84	86	74	77	78	79	75	73	63	931
Florida	006	20	18	22	20	22	21	21	20	18	22	23	18	244
Midwest	033	228	210	240	233	246	257	263	276	250	241	249	227	2,920
Upper Midwest 2/	030	127	116	100	73	88	140	141	157	136	141	141	120	1,480
Central 3/	032	142	138	161	123	170	166	159	162	146	147	150	123	1,787
Southwest	126	103	116	127	109	130	124	138	139	117	125	120	122	1,472
Arizona 4/	131	21	21	25	23	24	25	25	25	20	28	30	24	292
Pacific Northwest 5/	124	32	33	35	39	41	43	43	51	42	45	48	34	487
All Markets Combined		1,203	1,142	1,278	1,188	1,313	1,324	1,335	1,400	1,248	1,286	1,275	1,112	15,104

1/ All Markets Combined and TOTAL may not add due to rounding.

2/ Handlers in this marketing area elected not to pool producer milk used in Class II in February-May due to the relationship between the order's Class II and uniform prices.

3/ Handlers in this marketing area elected not to pool producer milk used in Class II in April and May due to the relationship between the order's Class II and uniform prices.

4/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

5/ Handlers in this marketing area elected not to pool producer milk used in Class II in September and December due to the relationship between the order's Class II and uniform prices.

Table 18—Class II Utilization Percentage of Producer Milk, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	18.59	18.64	18.49	18.75	19.47	20.07	20.15	23.11	21.16	21.47	20.76	16.79	19.74
Appalachian	005	15.04	14.94	17.21	18.87	17.43	16.62	16.99	15.31	15.76	16.17	16.10	13.73	16.24
Southeast	007	10.72	11.05	11.24	11.24	11.78	10.89	12.78	12.28	13.01	11.90	11.94	10.26	11.55
Florida	006	7.15	6.97	7.25	7.25	8.27	8.41	8.51	8.17	7.76	8.61	9.15	6.65	7.82
Mideast	033	15.10	15.14	15.57	15.40	15.58	17.15	17.50	20.32	19.81	17.83	19.04	16.49	16.99
Upper Midwest	030	5.71	5.65	4.42	3.33	3.86	6.51	6.15	6.50	7.01	5.88	5.94	5.28	5.51
Central	032	11.41	11.24	11.66	9.21	12.15	16.30	12.11	13.71	18.08	12.90	15.58	13.58	12.84
Southwest	126	11.46	13.01	12.71	11.59	12.03	12.53	13.16	14.82	13.29	13.66	12.95	11.36	12.69
Arizona 2/	131	7.71	8.29	8.62	7.76	7.35	8.11	9.03	9.42	8.17	10.40	10.85	8.05	8.62
Pacific Northwest	124	5.07	5.48	5.21	5.71	5.77	6.54	6.10	7.02	8.51	7.28	8.01	7.48	6.43
All Markets Combined		11.65	11.80	11.76	11.25	11.90	13.22	12.85	13.92	14.41	13.06	13.36	11.54	12.52

1/ It should be noted that the election not to pool milk normally associated with an order due to a disadvantageous price relationship affects the comparability of this statistic. See footnotes on Table 17. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of producer milk used in Class II and total producer milk.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 19--Butterfat Test of Producer Milk Used in Class II Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
		Percent												
Northeast	001	7.29	7.52	7.73	7.61	7.60	7.60	7.30	6.72	7.41	7.44	7.45	7.90	7.45
Appalachian	005	7.64	8.28	7.79	7.09	8.04	7.98	8.21	9.54	9.06	8.01	9.28	8.08	8.19
Southeast	007	7.47	8.72	8.41	7.85	7.52	8.28	7.56	8.33	7.35	7.95	7.34	7.22	7.84
Florida	006	14.75	14.60	14.29	16.61	14.79	15.86	15.79	17.06	17.23	15.50	14.55	15.70	15.53
Mideast	033	6.08	5.91	6.40	6.40	6.82	6.89	6.68	6.39	6.07	6.49	6.38	6.11	6.40
Upper Midwest	030	6.96	7.24	8.82	10.73	10.67	7.49	7.19	6.86	7.11	7.45	7.48	7.52	7.73
Central	032	6.68	6.80	7.00	7.64	7.16	7.16	7.16	7.18	6.95	7.15	7.14	7.32	7.10
Southwest	126	8.22	7.51	7.61	8.27	8.12	8.54	7.99	8.02	7.89	7.53	8.00	6.90	7.88
Arizona 2/	131	11.09	14.19	13.19	10.76	13.23	11.94	13.86	11.47	10.67	10.07	10.26	12.29	11.87
Pacific Northwest	124	10.63	9.72	10.85	9.70	10.06	10.40	9.71	9.72	9.52	9.85	9.60	11.44	10.05
All Markets Combined		7.35	7.53	7.82	7.88	7.99	7.85	7.63	7.43	7.46	7.58	7.64	7.62	7.65

1/ Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of butterfat and producer milk pounds used in Class II.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 20--Nonfat Solids Test of Producer Milk Used in Class II Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
		Percent												
Northeast	001	8.46	8.44	8.43	8.37	8.40	8.32	8.28	8.33	8.35	8.45	8.47	8.40	8.39
Mideast	033	8.58	8.59	8.54	8.48	8.42	8.36	8.36	8.39	8.52	8.57	8.57	8.56	8.49
Upper Midwest	030	8.48	8.48	8.31	8.11	8.10	8.32	8.30	8.36	8.44	8.50	8.49	8.46	8.38
Central	032	8.61	8.60	8.56	8.42	8.48	8.41	8.38	8.40	8.53	8.58	8.59	8.58	8.51
Southwest	126	8.42	8.47	8.39	8.27	8.33	8.25	8.29	8.29	8.42	8.50	8.48	8.59	8.39
Pacific Northwest	124	8.17	8.27	8.17	8.23	8.15	8.09	8.14	8.17	8.25	8.29	8.31	8.13	8.20
All Markets Combined		8.50	8.50	8.45	8.37	8.37	8.33	8.31	8.34	8.43	8.50	8.50	8.48	8.42

1/ Figures are shown for those orders for which the information is available; that is, the orders with the component pricing system for paying producers. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of nonfat solids and producer milk pounds used in Class II.

Table 21--Utilization of Producer Milk in Class III Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Million Pounds														
Northeast	001	432	407	442	433	448	429	461	420	389	404	391	419	5,075
Appalachian	005	23	21	34	40	45	40	26	18	15	25	22	26	334
Southeast	007	167	151	187	190	176	166	98	99	109	113	111	92	1,659
Florida	006	2	12	20	18	23	12	4	1	1	1	2/	6	101
Mideast 3/	033	602	559	623	617	646	625	606	462	351	459	427	459	6,435
Upper Midwest 4/	030	1,641	1,524	1,711	1,690	1,739	1,620	1,756	1,841	1,370	1,788	1,771	1,668	20,119
Central 5/	032	573	609	694	696	715	381	680	540	194	504	324	284	6,194
Southwest 6/	126	233	221	282	307	379	366	421	373	367	371	381	472	4,172
Arizona 7/	131	80	89	93	99	107	105	98	90	103	100	100	108	1,171
Pacific Northwest 8/	124	172	196	217	213	225	185	222	239	31	187	169	23	2,078
All Markets Combined		3,926	3,790	4,302	4,303	4,503	3,928	4,371	4,082	2,930	3,952	3,696	3,556	47,338

1/ All Markets Combined and TOTAL may not add due to rounding.

2/ Less than 500,000 pounds.

3/ Handlers in this marketing area elected not to pool producer milk used in Class III in September, November, and December due to the relationship between the order's Class III and uniform price.

4/ Handlers in this marketing area elected not to pool producer milk used in Class III in January-July and September-December due to the relationship between the order's Class III and uniform price.

5/ Handlers in this marketing area elected not to pool producer milk used in Class III in January, June, September, November, and December due to the relationship between the order's Class III and uniform price.

6/ Handlers in this marketing area elected not to pool producer milk used in Class III in June-August due to the relationship between the order's Class III and uniform price.

7/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

8/ Handlers in this marketing area elected not to pool producer milk used in Class III in September and December due to the relationship between the order's Class III and uniform price.

Table 22--Class III Utilization Percentage of Producer Milk, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	21.75	22.18	21.40	21.62	21.64	22.56	24.18	23.22	22.27	22.75	22.53	22.70	22.38
Appalachian	005	4.36	4.26	5.87	6.88	7.71	7.34	5.25	3.66	3.37	5.08	4.40	5.00	5.36
Southeast	007	21.55	22.49	24.57	25.57	24.22	24.52	16.24	15.63	17.91	17.98	18.02	15.06	20.60
Florida	006	0.79	4.56	6.73	6.42	8.60	4.96	1.83	0.30	0.45	0.27	0.19	2.20	3.24
Midwest	033	39.84	40.23	40.36	40.74	40.94	41.63	40.36	33.93	27.84	34.01	32.63	33.44	37.44
Upper Midwest	030	74.04	74.10	75.32	77.23	76.62	75.06	76.40	76.13	70.70	74.72	74.77	73.22	74.92
Central	032	46.02	49.63	50.23	52.24	51.07	37.27	51.75	45.64	24.08	44.11	33.75	31.46	44.50
Southwest	126	25.87	24.86	28.14	32.54	34.97	36.89	40.07	39.72	41.78	40.45	41.04	43.78	35.96
Arizona 2/	131	29.88	35.31	32.18	32.85	32.85	34.17	35.31	34.53	41.06	36.47	35.99	35.77	34.61
Pacific Northwest	124	27.50	32.37	31.96	30.95	31.29	27.92	31.37	32.88	6.39	30.20	28.25	5.08	27.45
All Markets Combined		38.01	39.15	39.59	40.71	40.83	39.22	42.07	40.60	33.83	40.12	38.73	36.93	39.25

1/ It should be noted that the election not to pool milk normally associated with an order due to a disadvantageous price relationship affects the comparability of this statistic. See footnotes on Table 21. Figures shown for all Markets Combined and Average are computed from the applicable monthly or year-to-year date totals of producer milk used in Class III and total producer milk.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 23—Butterfat Test of Producer Milk Used in Class III Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	4.06	4.12	4.21	3.96	3.98	3.76	3.72	3.69	3.90	3.87	3.92	3.81	3.92
Appalachian	005	7.09	7.04	5.40	4.88	4.47	3.91	4.31	5.40	8.26	6.34	6.12	4.97	5.39
Southeast	007	3.75	3.57	3.61	3.61	3.75	3.58	3.88	4.22	4.47	4.47	4.56	4.35	3.90
Florida	006	2.54	2.03	4.29	2.89	2.22	2.03	4.84	40.91	51.01	33.85	57.79	4.06	4.19
Mideast	033	3.53	3.45	3.42	3.41	3.35	3.36	3.32	3.34	3.71	3.58	3.69	3.44	3.45
Upper Midwest	030	3.73	3.70	3.70	3.62	3.57	3.51	3.49	3.51	3.66	3.78	3.79	3.73	3.65
Central	032	3.52	3.52	3.49	3.52	3.48	3.19	3.32	3.46	3.43	3.65	3.46	3.57	3.47
Southwest	126	3.62	3.61	3.64	3.65	3.52	3.44	3.54	3.40	3.46	3.57	3.77	3.76	3.58
Arizona 2/	131	6.06	5.08	5.70	6.03	5.46	5.24	3.97	4.31	4.28	4.68	4.59	4.75	5.00
Pacific Northwest	124	3.93	3.92	3.87	3.83	3.74	3.69	3.72	3.99	4.49	3.90	3.94	4.18	3.86
All Markets Combined		3.77	3.73	3.74	3.69	3.62	3.53	3.51	3.57	3.76	3.80	3.84	3.75	3.69

1/ Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of butterfat and producer milk pounds used in Class III.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

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Table 24—Protein (True) Test of Producer Milk Used in Class III Products, by Federal Milk Order Marketing Area, 20061/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	3.07	3.05	3.05	3.00	3.01	2.96	2.94	2.96	3.04	3.11	3.10	3.08	3.03
Midwest	033	3.07	3.07	3.06	3.02	3.01	2.97	2.94	2.96	3.05	3.13	3.13	3.11	3.04
Upper Midwest	030	3.06	3.08	3.06	3.02	3.00	2.96	2.92	2.95	3.06	3.13	3.12	3.10	3.04
Central	032	3.07	3.08	3.05	3.03	3.01	2.97	2.93	2.96	3.08	3.14	3.14	3.12	3.04
Southwest	126	3.11	3.10	3.05	2.98	2.99	2.95	2.94	2.97	3.06	3.15	3.20	3.19	3.06
Pacific Northwest	124	3.08	3.10	3.07	3.04	3.03	3.01	3.00	3.04	3.08	3.18	3.19	3.17	3.07
All Markets Combined		3.07	3.08	3.06	3.02	3.01	2.97	2.93	2.96	3.06	3.13	3.13	3.11	3.04

1/ Figures are shown for those orders for which the information is available; that is, the orders with the component pricing system for paying producers. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of true protein and producer milk pounds used in Class III.

Table 25—Other Solids Test of Producer Milk Used in Class III Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	5.69	5.70	5.70	5.65	5.71	5.70	5.67	5.65	5.65	5.68	5.70	5.70	5.68
Midwest	033	5.74	5.75	5.76	5.75	5.75	5.73	5.72	5.71	5.68	5.72	5.70	5.71	5.73
Upper Midwest	030	5.71	5.74	5.73	5.72	5.74	5.73	5.74	5.74	5.73	5.73	5.72	5.71	5.73
Central	032	5.73	5.74	5.74	5.74	5.75	5.75	5.76	5.74	5.74	5.73	5.71	5.73	5.74
Southwest	126	5.72	5.72	5.70	5.70	5.75	5.74	5.71	5.72	5.74	5.68	5.66	5.67	5.71
Pacific Northwest	124	5.68	5.71	5.73	5.74	5.71	5.67	5.69	5.67	5.63	5.67	5.66	5.65	5.69
All Markets Combined		5.72	5.73	5.73	5.72	5.74	5.73	5.73	5.72	5.71	5.71	5.71	5.70	5.72

1/ Figures are shown for those orders for which the information is available; that is, the orders with the component pricing system for paying producers. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of other solids and producer milk pounds used in Class III.

Table 26--Utilization of Producer Milk in Class IV Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Million Pounds														
Northeast	001	291	274	305	364	324	249	246	88	78	75	77	212	2,584
Appalachian	005	58	67	74	103	84	82	56	33	33	42	41	85	758
Southeast	007	106	73	77	93	69	56	54	35	17	27	30	56	691
Florida	006	18	16	16	20	7	10	12	8	8	16	7	16	154
Midcast	033	109	96	94	147	127	113	133	65	81	78	59	129	1,230
Upper Midwest	030	68	65	64	72	59	46	55	32	41	67	60	99	728
Central	032	143	135	139	168	154	132	143	108	96	110	115	123	1,566
Southwest	126	198	218	227	192	209	173	169	58	37	54	72	133	1,740
Arizona 2/	131	82	61	77	82	83	70	49	26	11	29	30	52	652
Pacific Northwest 3/	124	236	214	241	258	258	249	271	247	225	190	182	201	2,771
All Markets Combined		1,310	1,218	1,314	1,500	1,374	1,179	1,188	699	627	688	673	1,105	12,873

1/ All Markets Combined and TOTAL may not add due to rounding.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

3/ Handlers in this marketing area elected not to pool producer milk used in Class IV in September and December due to the relationship between the order's Class II and uniform prices.

Table 27—Class IV Utilization Percentage of Producer Milk, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	14.66	14.93	14.79	18.17	15.65	13.10	12.93	4.88	4.48	4.20	4.45	11.47	11.39
Appalachian	005	11.18	13.63	12.84	18.00	14.31	15.03	11.46	6.78	7.34	8.38	8.12	16.28	12.14
Southeast	007	13.71	10.82	10.08	12.51	9.52	8.24	8.88	5.47	2.74	4.24	4.83	9.15	8.58
Florida	006	6.64	6.14	5.26	7.21	2.70	3.79	4.80	3.21	3.27	6.52	2.80	6.05	4.92
Mideast	033	7.18	6.91	6.11	9.69	8.04	7.52	8.85	4.78	6.42	5.75	4.51	9.38	7.15
Upper Midwest	030	3.07	3.15	2.80	3.31	2.60	2.12	2.40	1.30	2.13	2.81	2.52	4.36	2.71
Central	032	11.50	10.97	10.08	12.65	10.97	12.97	10.91	9.09	11.87	9.63	12.01	13.58	11.25
Southwest	126	21.94	24.55	22.70	20.33	19.30	17.44	16.08	6.22	4.16	5.88	7.77	12.33	15.00
Arizona 2/	131	30.62	24.06	26.54	27.13	25.53	22.79	17.75	10.10	4.59	10.72	10.77	17.06	19.27
Pacific Northwest	124	37.67	35.28	35.45	37.50	35.90	37.65	38.29	33.98	46.05	30.66	30.54	44.28	36.60
All Markets Combined		12.68	12.58	12.09	14.19	12.46	11.78	11.43	6.95	7.23	6.98	7.05	11.48	10.67

1/ It should be noted that the election not to pool milk normally associated with an order due to a disadvantageous price relationship affects the comparability of this statistic. See footnote on Table 26. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of producer milk used in Class IV and total producer milk from the applicable monthly or year-to-date totals of producer milk used in Class IV and total producer milk.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 28--Butterfat Test of Producer Milk Used in Class IV Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
Percent														
Northeast	001	4.58	3.96	3.69	3.40	3.11	2.94	2.83	4.07	5.33	6.39	6.35	4.96	3.88
Appalachian	005	7.99	6.25	5.85	4.61	4.33	4.40	4.62	5.53	6.34	8.36	6.44	6.10	5.67
Southeast	007	7.54	7.46	7.07	5.87	6.42	6.17	6.06	9.16	19.30	14.46	14.02	10.20	8.04
Florida	006	12.52	14.17	11.92	7.66	16.40	8.70	6.08	8.17	8.24	8.08	13.86	11.05	10.46
Midwest	033	10.42	11.37	11.12	7.20	7.03	4.97	4.86	7.74	9.16	10.81	12.09	8.72	8.42
Upper Midwest	030	11.95	11.75	11.37	9.89	10.83	11.20	9.44	15.21	14.62	10.90	11.82	9.47	11.19
Central	032	7.11	6.70	6.49	5.27	4.69	4.33	4.42	4.48	6.58	6.74	6.66	6.77	5.80
Southwest	126	4.72	4.47	4.04	3.65	3.38	2.50	2.34	2.89	6.83	6.32	4.06	4.93	3.89
Arizona 2/	131	1.35	0.09	0.03	0.22	0.20	0.02	0.40	0.16	1.19	0.35	0.43	1.35	0.44
Pacific Northwest	124	4.30	4.24	4.14	4.03	3.89	3.61	3.61	3.33	4.07	4.15	4.23	4.25	3.96
All Markets Combined		5.99	5.68	5.24	4.55	4.30	3.82	3.83	4.84	6.65	6.97	6.73	6.15	5.21

1/ Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of butterfat and producer milk pounds used in Class IV.

2/ Effective May 1, 2006, the name of the Federal order was changed. Clark County, Nevada which includes Las Vegas, was removed from the marketing area.

Table 29--Nonfat Solids Test of Producer Milk Used in Class IV Products, by Federal Milk Order Marketing Area, 2006 1/

Federal Milk Order Marketing Area	Order Number	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVERAGE
		Percent												
Northeast	001	8.72	8.77	8.80	8.80	8.82	8.77	8.70	8.59	8.57	8.56	8.60	8.68	8.74
Midwest	033	8.18	8.08	8.09	8.40	8.38	8.52	8.52	8.26	8.23	8.16	7.59	8.31	8.27
Upper Midwest	030	8.02	8.08	8.07	8.17	8.07	7.98	8.10	7.64	7.79	8.21	8.13	8.31	8.09
Central	032	8.48	8.52	8.52	8.59	8.64	8.60	8.59	8.60	8.54	8.58	8.52	8.53	8.56
Southwest	126	8.74	8.75	8.74	8.70	8.76	8.81	8.79	8.75	8.50	8.59	8.86	8.78	8.75
Pacific Northwest	124	8.70	8.76	8.75	8.74	8.69	8.67	8.68	8.74	8.74	8.82	8.80	8.78	8.73
All Markets Combined		8.58	8.62	8.63	8.65	8.67	8.66	8.64	8.58	8.52	8.56	8.53	8.60	8.62

1/ Figures are shown for those orders for which the information is available; that is, the orders with the component pricing system for paying producers. Figures shown for All Markets Combined and AVERAGE are computed from the applicable monthly or year-to-date totals of nonfat solids and producer milk pounds used in Class IV.

ASSUMPTIONS FOR PRICE IMPACT ANALYSES

04/03/07

	Avg 2006
Cheese NASS Price	1.2470
Butter NASS Price	1.2193
NFDM NASS Price	0.8874
Dry Whey NASS Price	0.3285

Standard BF	3.50%
Standard True Protein	2.9915%
Standard Other Solids	5.6935%
Standard SNF	8.6850%

	Class I	Class II	Class III	Class IV	Producer Wtd
Avg BF Test	1.94%	7.65%	3.69%	5.21%	3.69%
Avg True Protein Test	—	—	3.04%	—	3.05%
Avg Other Solids Test	—	—	5.72%	—	5.71%
Avg Solids Not Fat	8.93%	8.42%	—	8.62%	8.76%
Million Lbs of Producer Milk	45,304	15,104	47,338	12,873	120,619
Utilization	37.56%	12.52%	39.25%	10.67%	1
Number of Producers	51,355				
Annual Deliveries	120,618,000,000				
Average per Producer	2,348,710				

**Formula Comparisons: Impact of Tentative Final Decision
December 2000 to Tentative Final Decision November
2006 on Component, Class and Blend Prices**

04/06/07

	Butter to Butterfat		Cheese to Protein		NFDM to SNF		Solids	
	Current	Changed	Current	Changed	Current	Changed	Current	Changed
Product Price	1.2193	1.2193	1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
Make Allowance	0.1202	0.1150	0.1682	0.1650	0.1570	0.1400	0.1956	0.1400
Net Per Pound	1.0991	1.1043	1.0788	1.0820	0.7304	0.7474	0.1329	0.1885
Product Yield	1.20	1.220	1.383	1.405	0.99	1.00	1.03	1.03
Product Price			1.247	1.247				
Make Allowance			0.1682	0.165				
Net Per Pound			1.0788	1.082				
Cheese from Butter yield			1.572	1.582				
Class III Butterfat			1.6959	1.7117				
Butterfat Price			1.3189	1.3472				
Butterfat Recovery			0.9	0.9				
Fractional pound of butter			1.1870	1.2125				
Class IV BF to Class III			0.5088	0.4992				
Fat to True Protein Ratio			1.17	1.28				
Protein Before Adjustment			1.4920	1.5202				
Adjustment to Protein			0.5953	0.6390				
Component Prices	1.3189	1.3472	2.0873	2.1592	0.7231	0.7474	0.1369	0.1942
Diff		0.0283		0.0719		0.0243		0.0573

Using Current Formula
Based on Changes
Difference

At Standard Tests				
Class I	Class II	Class III	Class IV	
11.64	11.60	11.64	10.90	
12.28	11.91	12.28	11.21	
0.64	0.31	0.64	0.31	

Using Current Formula
Based on Changes
Difference

Prices At Test Cwt				
Class I	Class II	Class III	Class IV	Blend
9.70	16.80	11.73	12.78	11.71
10.30	17.22	12.36	13.13	12.28
0.60	0.42	0.63	0.35	0.56

Using Current Formula
Based on Changes
Difference
Per Avg \$/Producer

Dollars At Test (\$000,000)				
Class I	Class II	Class III	Class IV	Pool
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129
\$4,667	\$2,601	\$5,852	\$1,690	\$14,809
\$274	\$63	\$298	\$45	\$680

\$13,245

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**Comparison of Impact on Blend by Correcting the Errors
in Applying Shrink to Butter to Butterfat and Adj for Class
IV BF in Protein Price to Current Formula**

04/06/07

	Butter to Butterfat		Cheese to Protein		NFDM to SNF		Solids	
	Current	Changed	Current	Changed	Current	Changed	Current	Changed
Product Price	1.2193	1.2193	1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
Make Allowance	0.1202	0.1202	0.1682	0.1682	0.1570	0.1570	0.1956	0.1956
Net Per Pound	1.0991	1.0991	1.0788	1.0788	0.7304	0.7304	0.1329	0.1329
Product Yield	1.20	1.211	1.383	1.383	0.99	0.99	1.03	1.03
Product Price			1.247	1.247				
Make Allowance			0.1682	0.1682				
Net Per Pound			1.0788	1.0788				
Cheese from Butter yield			1.572	1.572				
Class III Butterfat			1.6959	1.6959				
Butterfat Price			1.3189	1.3310				
Butterfat Recovery			0.9	0.88425				
Fractional pound of butter			1.1870	1.1769				
Class IV BF to Class III			0.5088	0.5189				
Fat to True Protein Ratio			1.17	1.17				
Protein Before Adjustment			1.4920	1.4920				
Adjustment to Protein			0.5953	0.6071				
Component Prices	1.3189	1.3310	2.0873	2.0991	0.7231	0.7231	0.1369	0.1369
Diff		0.0121		0.0118		0.0000		0.0000

At Standard Tests				
Class I	Class II	Class III	Class IV	
11.64	11.60	11.64	10.90	
11.72	11.64	11.72	10.94	
0.08	0.04	0.08	0.04	

Prices At Test Cwt					
Class I	Class II	Class III	Class IV	Blend	
9.70	16.80	11.73	12.78	11.71	
9.76	16.89	11.81	12.84	11.79	
0.06	0.09	0.08	0.06	0.07	

Dollars At Test (\$000,000)					
Class I	Class II	Class III	Class IV	Pool	
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129	
\$4,419	\$2,551	\$5,591	\$1,653	\$14,215	
\$27	\$14	\$37	\$8	\$86	

\$1,683

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Appendix B. Milk Sampling, Hauling and Transportation¹

Milk sampling, hauling, and transport are integral parts of a modern dairy industry. Hauling, sampling and transport can be categorized into three (3) separate functions: Dairy Plant Samplers, Bulk Milk Hauling and Sampling and Milk Transport from one (1) milk handling facility to another.

I. MILK SAMPLING AND HAULING PROCEDURES

The dairy plant sampler is a person responsible for the collection of official samples for regulatory purposes outlined in Section 6 of this Ordinance. These persons are employees of the Regulatory Agency and are evaluated at least once each two (2) year period by a State Sampling Surveillance Officer (SSO). These individuals are evaluated using Form FDA 2399 - MILK SAMPLE COLLECTOR EVALUATION FORM, which is derived from the most current edition of SMEDP. (See Appendix M.)

The bulk milk hauler/sampler is any person who collects official samples and may transport raw milk from a farm and/or raw milk products to or from a milk plant, receiving station or transfer station and has in their possession a permit from any State to sample such products. The bulk milk hauler/sampler occupies a unique position making this individual a critical factor in the current structure of milk marketing. As a weigher and sampler, they stand as the official, and frequently the only judge of milk volumes bought and sold. As a milk receiver, the operating habits directly affect the quality and safety of milk committed to their care. When the obligations include the collection and delivery of samples for laboratory analysis, the bulk milk hauler/sampler becomes a vital part of the quality control and regulatory programs affecting producer dairies. Section 3 of this Ordinance requires that Regulatory Agencies establish criteria for issuing permits to bulk milk hauler/samplers. These individuals are evaluated at least once each two (2) year period using Form FDA 2399a - MILK TANK TRUCK, HAULER REPORT AND SAMPLER EVALUATION FORM. (See Appendix M.)

The milk tank truck driver is any person who transports raw or pasteurized milk products to or from a milk plant, receiving station or transfer station. Any transportation of a direct farm pickup requires the milk tank truck driver to have responsibility for accompanying official samples.

The criteria for permitting these individuals should embrace at least the following:

TRAINING: To understand the importance of bulk milk collection and the techniques of sampling, all bulk milk hauler/samplers must be told why, and instructed how, in the proper procedures of picking up milk and the collection of samples. The Regulatory Agency, dairy field person, route supervisors or any appropriate person whose techniques and practices are known to meet requirements can conduct this training. If the Regulatory Agency does not conduct the

¹U.S. Department of Health and Human Services, U.S. Food and Drug Administration Center for Food Safety & Applied Nutrition, Grade "A" Pasteurized Milk Ordinance, 2001 Revision, May 15, 2002 <http://www.cfsan.fda.gov/~ear/pmo01a-b.html>

training, the training must be approved by or conducted under the supervision of the Regulatory Agency.

Training also frequently takes the form of classroom sessions in which the trainer describes pickup practices, demonstrates sampling and care of samples and affords the candidate the opportunity for guided practice in these techniques. Basic considerations of sanitation and personal cleanliness, which are important to the protection of milk quality, are discussed here. Officials administering weights and measures may participate in these programs and provide instruction in the measuring of milk and the keeping of required records.

An examination, approved by the Regulatory Agency, shall be administered at the conclusion of this program. Candidates failing the exam, a score of less than seventy percent (70%), shall be denied permits or licenses until indicated deficiencies are corrected. The examination should be adequate enough to determine if a bulk milk hauler/sampler is competent. The exam shall be composed of a minimum of twenty (20) total questions broken down into the following areas:

1.

Six (6) questions relating to sanitation and personal cleanliness;

2.

Six (6) questions relating to sampling and weighing procedures;

3.

Four (4) questions relating to equipment, including the proper use, care, cleaning, etc.; and

4.

Four (4) questions relating to proper record keeping requirements.

Regularly scheduled refresher short courses by the regulatory agents and officials administering weights and measures would assist in maintaining and increasing the efficiency of the bulk milk hauler/sampler.

QUALIFICATIONS:

1.

Experience: Experience may include a required period of observation during which the candidate accompanies a bulk milk hauler/sampler in the performance of their duties.

2.

Personal References: Permit applications should be supported by suitable references testifying to the character and integrity of the candidate.

EVALUATION OF BULK MILK HAULER/SAMPLER PROCEDURES: The routine inspection of bulk milk hauling/sampling procedures provides the Regulatory Agency with an

opportunity to check both the condition of the bulk milk hauler/sampler's equipment and the degree of conformance with required practices.

The bulk milk hauler/sampler's technique is best determined when the regulatory agent is able to observe the bulk milk hauler/sampler at one (1) or more farms. Each bulk milk hauler/ sampler must be inspected by the Regulatory Agency prior to the issuance of a permit and at least once every twenty-four (24) months thereafter as referenced in Section 5 of this Ordinance. The bulk milk hauler/sampler must hold a valid permit prior to the collection of official samples. States may use inspections from any Regulatory Agency as a means of maintaining record requirements and enforcement.

The procedures for sampling and the care of samples should be in compliance with the current edition of SMEDP.

Specific Items to be evaluated in determining compliance include:

1.

Personal Appearance: Bulk milk hauler/samplers shall practice good hygiene; shall maintain a neat and clean appearance; and not use tobacco in the milkhous.

2.

Equipment Requirements:

1.

Sample rack and compartment to hold all samples collected.

2.

Refrigerant to hold temperature of milk samples between 0° - 4.4°C (32° - 40°F).

3.

Sample dipper or other sampling devices of sanitary design approved by the Regulatory Agency, clean and in good repair.

4.

Sterile sample bags, tubes or bottles; properly stored.

5.

Calibrated pocket thermometer; certified for accuracy every six (6) months; accuracy $\pm 1^{\circ}\text{C}$ (2°F).

6.

Approved sanitizing agent and sample dipper container.

7.

Watch for timing milk agitation.

8.

Applicable sanitizer test kit.

3.

Milk Quality Checks:

1.

Examine the milk by sight and smell for any off odor or any other abnormalities that would class the milk as not being acceptable. Reject if necessary.

2.

Wash hands thoroughly and dry with a clean single-service towel or acceptable air dryer immediately prior to measuring and/or sampling the milk.

3.

Record milk temperature, time, date of pick-up and bulk milk hauler/sampler identification on the farm weight ticket; monthly the hauler/sampler shall check the accuracy of the thermometer on each bulk tank and record results. Pocket thermometer must be sanitized before use.

4.

Milk Measurements:

1.

The measurement of the milk shall be taken before agitation. If the agitator is running upon arrival at the milkhous, the measurement can be taken only after the surface of the milk has been quiescent.

2.

Carefully insert the measuring rod, after it has been wiped dry with a single-service towel, into the tank. Repeat this procedure until two identical measurements are taken. Record measurements on the farm weight ticket.

3.

Do not contaminate the milk during measurement.

5.

Universal Sampling System: When bulk milk hauler/samplers collect raw milk samples, the "universal sampling system" shall be employed, whereby samples are collected every time milk is picked up at the farm. This system permits the Regulatory Agency, at its discretion, at any given time and without notification to the industry, to analyze samples collected by the bulk milk hauler/sampler. The use of the "universal sample" puts more validity and faith in samples collected by industry personnel. The following are sampling procedures:

1.

Pick-up and handling practices are conducted to prevent contamination of milk contact surfaces.

2.

The milk must be agitated a sufficient time to obtain a homogeneous blend. Follow State and/or manufacturer's guidelines.

3.

While the tank is being agitated, bring the sample container, dipper, dipper container and sanitizing agent for the outlet valve, or single-service sampling tubes into the milkhouse aseptically. Remove the cap from the tank outlet valve and examine for milk deposits or foreign matter and then sanitize if necessary. Protect the hose cap from contamination when removing it from the transfer hose and during storage.

4.

The sample may only be collected after the milk has been properly agitated. Remove the dipper or sampling device from the sanitizing solution or sterile container and rinse at least twice in the milk.

5.

Collect a representative sample or samples from the bulk tank. When transferring milk from the sampling equipment, caution should be used to assure that no milk is spilled back into the tank. Do not fill the sampling container more than $\frac{3}{4}$ full. Close the cover on the sample container.

6.

The sample dipper shall be rinsed free of milk and placed in its carrying container.

7.

Close the cover or lid of the bulk tank.

8.

The sample must be identified with the producer's number at the point of collection.

9.

A temperature control sample must be taken at the first stop of each load. This sample must be labeled with time, date, temperature and producer and bulk milk hauler/sampler identification.

10.

Place the sample or samples immediately into the sample storage case.

6.

Pump Out Procedures:

1.

Once the measurement and sampling procedures are completed, with the agitator still running, open the outlet valve and start the pump. Turn off the agitator when the level of milk is below the level that will cause over-agitation.

2.

When the milk has been removed from the tank, disconnect the hose from the outlet valve and cap the hose.

3.

Observe the inside surfaces of the bulk tank for foreign matter or extraneous material and record any objectionable observations on the farm weight ticket.

4.

With the outlet valve open, thoroughly rinse the entire inside surface of the tank with warm water.

7.

Sampling Responsibilities:

1.

All sample containers and single-service sampling tubes used for sampling shall comply with all the requirements that are in the current edition of SMEDP. Samples shall be cooled to and held between 0°C (32°F) and 4.4°C (40°F) during transit to the laboratory.

2.

Means shall be provided to properly protect the samples in the sample case. Keep refrigerant at an acceptable level.

3.

Racks must be provided so that the samples are properly cooled in an ice bath.

4.

Adequate insulation of the sample container box or ice chest shall be provided to maintain the proper temperature of the samples throughout the year.

The SSO's conduct periodic evaluations of sampling procedures. This program will promote uniformity and compliance of sample collection procedures.

**Milk Cows: Number of Operations, Percent of Inventory and
Percent of Milk Production by Size Group, United States,
2005-2006 1/**

Head	Operations	Operations	Percent of	Percent of	Percent of	Percent of
	Number	Number	Inventory	Inventory	Production	Production
	2005	2006	2005	2006	2005	2006
	Number	Number	Percent	Percent	Percent	Percent
29-Jan	22490	21280	2	1.9	1.3	1.2
30-49	14835	14145	6.4	6	5.1	4.9
50-99	23185	22215	17.1	16.3	15.2	14.3
100-199	10055	9780	14.6	14.1	13.5	13
200-499	4662	4577	15.4	15	15.3	15
500-999	1700	1700	12.8	12.6	14.3	14.3
1,000-1,999	850	870	12	12.5	13.4	13.9
2,000+	523	573	19.7	21.6	21.9	23.4
Total	78300	75140	100	100	100	100

1/ An operation is any place having one or more head of milk cows, excluding cows used to nurse calves, on hand at any time during the year. Percents reflect average distributions of various probability surveys conducted during the year but are based primarily on beginning-of-year and mid-year surveys

Farms, Land In Farms, and Livestock Operations 2006 Summary: Released February 2, 2007, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, U.S. Department of Agriculture.

**Comparison of Impact on Class, Component, and Blend
Prices by Eliminating Farm-to-Plant Shrink to Current
Formula**

04/06/07

	Butter to Butterfat		Cheese to Protein		NFDM to SNF		Solids	
	Current	Changed	Current	Changed	Current	Changed	Current	Changed
Product Price	1.2193	1.2193	1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
Make Allowance	0.1202	0.1202	0.1682	0.1682	0.1570	0.1570	0.1956	0.1956
Net Per Pound	1.0991	1.0991	1.0788	1.0788	0.7304	0.7304	0.1329	0.1329
Product Yield	1.20	1.220	1.383	1.386	0.99	0.9925	1.03	1.03
Product Price			1.247	1.247				
Make Allowance			0.1682	0.1682				
Net Per Pound			1.0788	1.0788				
Cheese from Butter yield			1.572	1.582				
Class III Butterfat			1.6959	1.7067				
Butterfat Price			1.3189	1.3409				
Butterfat Recovery			0.9	0.9				
Fractional pound of butter			1.1870	1.2068				
Class IV BF to Class III			0.5088	0.4998				
Fat to True Protein Ratio			1.17	1.17				
Protein Before Adjustment			1.4920	1.4952				
Adjustment to Protein			0.5953	0.5848				
Component Prices	1.3189	1.3409	2.0873	2.0800	0.7231	0.7249	0.1369	0.1369
Diff		0.0220		-0.0073		0.0018		0.0000

At Standard Tests

Class I	Class II	Class III	Class IV
11.64	11.60	11.64	10.90
11.69	11.69	11.69	10.99
0.06	0.09	0.06	0.09

Prices At Test Cwt

Class I	Class II	Class III	Class IV	Blend
9.70	16.80	11.73	12.78	11.71
9.72	16.98	11.79	12.91	11.78
0.02	0.18	0.06	0.13	0.07

Dollars At Test (\$000,000)

Class I	Class II	Class III	Class IV	Pool
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129
\$4,402	\$2,565	\$5,582	\$1,662	\$14,211
\$9	\$28	\$28	\$17	\$82

\$1,595

00

stretching process and/or applied to the surface of the cheese.

(e) When caciocavallo siciliano cheese is made solely from cow's milk, the name of such cheese is "Caciocavallo siciliano cheese". When made from sheep's milk or goat's milk or mixtures of these, or one or both of these with cow's milk, the name is followed by the words "made from _____", the blank being filled in with the name or names of the milks used, in order of predominance by weight.

(f) Label declaration: Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter, except that enzymes of animal, plant, or microbial origin may be declared as "enzymes".

[42 FR 14366, Mar. 15, 1977, as amended at 42 FR 39102, Aug. 2, 1977; 48 FR 49013, Oct. 24, 1983; 49 FR 10093, Mar. 19, 1984; 58 FR 2892, Jan. 6, 1993]

§ 133.113 Cheddar cheese.

(a) *Description.* (1) Cheddar cheese is the food prepared by the procedure set forth in paragraph (a)(3) of this section, or by any other procedure which produces a finished cheese having the same physical and chemical properties. The minimum milkfat content is 50 percent by weight of the solids, and the maximum moisture content is 39 percent by weight, as determined by the methods described in § 133.5. If the dairy ingredients used are not pasteurized, the cheese is cured at a temperature of not less than 35 °F for at least 60 days.

(2) If pasteurized dairy ingredients are used, the phenol equivalent value of 0.25 gram of cheddar cheese is not more than 3 micrograms as determined by the method described in § 133.5.

(3) One or more of the dairy ingredients specified in paragraph (b)(1) of this section may be warmed, treated with hydrogen peroxide/catalase, and is subjected to the action of a lactic acid-producing bacterial culture. One or more of the clotting enzymes specified in paragraph (b)(2) of this section is added to set the dairy ingredients to a semisolid mass. The mass is so cut, stirred, and heated with continued stirring, as to promote and regulate the separation of whey and curd. The whey

is drained off, and the curd is matted into a cohesive mass. The mass is cut into slabs, which are so piled and handled as to promote the drainage of whey and the development of acidity. The slabs are then cut into pieces, which may be rinsed by sprinkling or pouring water over them, with free and continuous drainage; but the duration of such rinsing is so limited that only the whey on the surface of such pieces is removed. The curd is salted, stirred, further drained, and pressed into forms. One or more of the other optional ingredients specified in paragraph (b)(3) of this section may be added during the procedure.

(b) *Optional ingredients.* The following safe and suitable ingredients may be used:

(1) *Dairy ingredients.* Milk, nonfat milk, or cream, as defined in § 133.3, used alone or in combination.

(2) *Clotting enzymes.* Rennet and/or other clotting enzymes of animal, plant, or microbial origin.

(3) *Other optional ingredients.* (i) Coloring.

(ii) Calcium chloride in an amount not more than 0.02 percent (calculated as anhydrous calcium chloride) of the weight of the dairy ingredients, used as a coagulation aid.

(iii) Enzymes of animal, plant, or microbial origin, used in curing or flavor development.

(iv) Antimycotic agents, applied to the surface of slices or cuts in consumer-sized packages.

(v) Hydrogen peroxide, followed by a sufficient quantity of catalase preparation to eliminate the hydrogen peroxide. The weight of the hydrogen peroxide shall not exceed 0.05 percent of the weight of the milk and the weight of the catalase shall not exceed 20 parts per million of the weight of the milk treated.

(c) *Nomenclature.* The name of the food is "cheddar cheese".

(d) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter, except that:

(1) Enzymes of animal, plant, or microbial origin may be declared as "enzymes"; and

(2) The dairy ingredients may be declared, in descending order or predominance, by the use of the terms "milkfat and nonfat milk" or "nonfat milk and milkfat", as appropriate.

[48 FR 2743, Jan. 21, 1983; 48 FR 11426, Mar. 18, 1983, as amended at 58 FR 2892, Jan. 6, 1993]

§ 133.114 Cheddar cheese for manufacturing.

Cheddar cheese for manufacturing conforms to the definition and standard of identity prescribed for cheddar cheese by § 133.113, except that the milk is not pasteurized, curing is not required, and the provisions of paragraph (b)(3)(iv) of that section do not apply.

[48 FR 2743, Jan. 21, 1983]

§ 133.116 Low sodium cheddar cheese.

Low sodium cheddar cheese is the food prepared from the same ingredients and in the same manner prescribed in § 133.113 for cheddar cheese and complies with all the provisions of § 133.113, including the requirements for label statement of ingredients, except that:

(a) It contains not more than 96 milligrams of sodium per pound of finished food.

(b) The name of the food is "low sodium cheddar cheese". The letters in the words "low sodium" shall be of the same size and style of type as the letters in the words "cheddar cheese", wherever such words appear on the label.

(c) If a salt substitute is used, the label shall bear the statement "_____ added as a salt substitute", the blank being filled in with the common name or names of the ingredient or ingredients used as a salt substitute.

(d) Low sodium cheddar cheese is subject to § 105.69 of this chapter.

[48 FR 2743, Jan. 21, 1983]

§ 133.118 Colby cheese.

(a) Colby cheese is the food prepared from milk and other ingredients specified in this section, by the procedure set forth in paragraph (b) of this section, or by another procedure which produces a finished cheese having the same physical and chemical properties as the cheese produced when the procedure set forth in paragraph (b) of this

section is used. It contains not more than 40 percent of moisture, and its solids contain not less than 50 percent of milkfat, as determined by the methods prescribed in § 133.5 (a), (b), and (d). If the milk used is not pasteurized, the cheese so made is cured at a temperature of not less than 35 °F for not less than 60 days.

(b) Milk, which may be pasteurized or clarified or both, and which may be warmed, is subjected to the action of harmless lactic-acid-producing bacteria, present in such milk or added thereto. Harmless artificial coloring may be added. Sufficient rennet, or other safe and suitable milk-clotting enzyme that produces equivalent curd formation, or both, with or without purified calcium chloride in a quantity not more than 0.02 percent (calculated as anhydrous calcium chloride) of the weight of the milk, is added to set the milk to a semisolid mass. The mass is so cut, stirred, and heated with continued stirring, as to promote and regulate the separation of whey and curd. A part of the whey is drained off, and the curd is cooled by adding water, the stirring being continued so as to prevent the pieces of curd from matting. The curd is drained, salted, stirred, further drained, and pressed into forms. A harmless preparation of enzymes of animal or plant origin capable of aiding in the curing or development of flavor of colby cheese may be added during the procedure, in such quantity that the weight of the solids of such preparation is not more than 0.1 percent of the weight of the milk used.

(c) For the purposes of this section:

(1) The word "milk" means cow's milk, which may be adjusted by separating part of the fat therefrom or by adding thereto one or more of the following: Cream, skim milk, concentrated skim milk, nonfat dry milk, water, in a quantity sufficient to reconstitute any concentrated skim milk or nonfat dry milk used.

(2) Milk shall be deemed to have been pasteurized if it has been held at a temperature of not less than 143 °F for a period of not less than 30 minutes, or for a time and at a temperature equivalent thereto in phosphatase destruction. Colby cheese shall be deemed not to have been made from pasteurized

(2) The dairy ingredients may be declared, in descending order of predominance, by the use of the terms "milkfat and nonfat milk" or "nonfat milk and milkfat", as appropriate.

[48 FR 2743, Jan. 21, 1983; 48 FR 11426, Mar. 18, 1983, as amended at 58 FR 2892, Jan. 6, 1993]

§ 133.114 Cheddar cheese for manufacturing.

Cheddar cheese for manufacturing conforms to the definition and standard of identity prescribed for cheddar cheese by § 133.113, except that the milk is not pasteurized, curing is not required, and the provisions of paragraph (b)(3)(iv) of that section do not apply.

[48 FR 2743, Jan. 21, 1983]

§ 133.116 Low sodium cheddar cheese.

Low sodium cheddar cheese is the food prepared from the same ingredients and in the same manner prescribed in § 133.113 for cheddar cheese and complies with all the provisions of § 133.113, including the requirements for label statement of ingredients, except that:

(a) It contains not more than 96 milligrams of sodium per pound of finished food.

(b) The name of the food is "low sodium cheddar cheese". The letters in the words "low sodium" shall be of the same size and style of type as the letters in the words "cheddar cheese", wherever such words appear on the label.

(c) If a salt substitute is used, the label shall bear the statement "_____ added as a salt substitute", the blank being filled in with the common name or names of the ingredient or ingredients used as a salt substitute.

(d) Low sodium cheddar cheese is subject to § 105.69 of this chapter.

[48 FR 2743, Jan. 21, 1983]

§ 133.118 Colby cheese.

(a) Colby cheese is the food prepared from milk and other ingredients specified in this section, by the procedure set forth in paragraph (b) of this section, or by another procedure which produces a finished cheese having the same physical and chemical properties as the cheese produced when the procedure set forth in paragraph (b) of this

section is used. It contains not more than 40 percent of moisture, and its solids contain not less than 50 percent of milkfat, as determined by the methods prescribed in § 133.5 (a), (b), and (d). If the milk used is not pasteurized, the cheese so made is cured at a temperature of not less than 35 °F for not less than 60 days.

(b) Milk, which may be pasteurized or clarified or both, and which may be warmed, is subjected to the action of harmless lactic-acid-producing bacteria, present in such milk or added thereto. Harmless artificial coloring may be added. Sufficient rennet, or other safe and suitable milk-clotting enzyme that produces equivalent curd formation, or both, with or without purified calcium chloride in a quantity not more than 0.02 percent (calculated as anhydrous calcium chloride) of the weight of the milk, is added to set the milk to a semisolid mass. The mass is so cut, stirred, and heated with continued stirring, as to promote and regulate the separation of whey and curd. A part of the whey is drained off, and the curd is cooled by adding water, the stirring being continued so as to prevent the pieces of curd from matting. The curd is drained, salted, stirred, further drained, and pressed into forms. A harmless preparation of enzymes of animal or plant origin capable of aiding in the curing or development of flavor of colby cheese may be added during the procedure, in such quantity that the weight of the solids of such preparation is not more than 0.1 percent of the weight of the milk used.

(c) For the purposes of this section:

(1) The word "milk" means cow's milk, which may be adjusted by separating part of the fat therefrom or by adding thereto one or more of the following: Cream, skim milk, concentrated skim milk, nonfat dry milk, water, in a quantity sufficient to reconstitute any concentrated skim milk or nonfat dry milk used.

(2) Milk shall be deemed to have been pasteurized if it has been held at a temperature of not less than 143 °F for a period of not less than 30 minutes, or for a time and at a temperature equivalent thereto in phosphatase destruction. Colby cheese shall be deemed not to have been made from pasteurized



**DAIRY PRODUCTS PRICES
CHEDDAR CHEESE**
Week Ending Saturday



**NATIONAL
AGRICULTURAL
STATISTICS
SERVICE**

National Agricultural Statistics Service
U.S. Department of Agriculture,
Rm 5030, South Building
1400 Independence Ave., S.W.
Washington, DC 20250-2000
Phone: 1-800-727-9540
Fax: 202-690-2090
Email: nass@nass.usda.gov

Dear Cheddar Cheese Producer:

USDA is collecting weekly information on cheddar cheese sales and prices to be published in the Dairy Products Prices Release every Friday. Your cooperation in filling out this form and returning it is requested. Response to this survey is **mandatory** under **Public Law No. 106-532**. The information that you provide is important in estimating U.S. cheddar cheese prices. **Individual reports will be considered confidential and will not be used in a way as to disclose company proprietary information.** Please "fax" the report promptly.

Please make corrections to name, address and Zip Code, if necessary.

INSTRUCTIONS

Sale:

When a transaction is completed, i.e. cheese is "shipped out" and title transfer occurs. Report for sales of Cheddar cheese only. Price is **f.o.b.** processing plant/storage center. Report **moisture content** of barrel cheese when sold. Report prices for "bare" or "naked" cheese with only minimum packaging as required for 40 lb. Blocks.

Include:

Total volume sold and total dollars received or price per pound. Include only cheese 4 - 30 days in age. CME Sales initial manufacturer sales only. CCC purchases under the Dairy Price Support and related programs.

Exclude:

Intra-company sales.
Transportation and clearing charges from price.
Block cheese that will be aged.
Resales of purchased cheese.
Forward pricing sales: sales in which the selling price was set (and not adjusted) 30 or more days before the transaction was completed.

See additional instructions on reverse side

If you have any questions, please call 202-690-2168.

CHEDDAR CHEESE SALES for the WEEK ENDING SATURDAY				
1. PLANT LOCATION	POUNDS OF CHEDDAR	TOTAL DOLLARS OR DOLLARS / LB.		MOISTURE CONTENT
500 lb. Barrels				
	511 lb.	521 \$	531 \$	541 %
	512 lb.	522 \$	532 \$	542 %
	513 lb.	523 \$	533 \$	543 %
	514 lb.	524 \$	534 \$	544 %
	515 lb.	525 \$	535 \$	545 %
40 lb. Blocks				
	611 lb.	621 \$	631 \$	
	612 lb.	622 \$	632 \$	
	613 lb.	623 \$	633 \$	
	614 lb.	624 \$	634 \$	
	615 lb.	625 \$	635 \$	

Reported by: _____ Phone: () _____ Date: _____
(Signature of authorized official)

INSTRUCTIONS FOR COMPLETING CHEDDAR CHEESE PRICE SURVEY

Report total pounds sold and total dollars received (or price per pound) for all bulk transactions during the week. Please report cheese sales according to the following terms and definitions.

1. Sale: When a transaction is completed, i.e. cheese is "shipped out" and the transfer occurs.

2. Variety: Cheddar cheese

3. Style:

40# blocks
500# barrels

4. Moisture content:

40# blocks – Exclude cheese that will be aged.

Barrels – Report moisture content of cheese sold, not to exceed 37.7%. NASS will adjust price to a benchmark of 38.0% based on standard moisture adjustment formulas.

5. Age:

Not less than 4 days or more than 30 days on date of sale.

6. Grade:

Barrels – Wisconsin State Brand, USDA Extra Grade or better.

40# blocks – Wisconsin State Brand, USDA Grade A or better.

7. Color:

Barrels – White

40# blocks – colored between 6-8 on the National Cheese Institute color chart.

8. Packaging:

40# blocks – Price should reflect cheese wrapped in a sealed, airtight package in corrugated or solid fiberboard containers with a reinforcing inner liner or sleeve. Exclude all other packaging costs from the reported price.
Barrels – Exclude all packaging costs from the reported price.

9. Price:

Price should be reported as price per pound or total dollars received.

Price is f.o.b. processing plant/storage center.

21 U.S.C.A. § 321a

United States Code Annotated Currentness
Title 21. Food and Drugs (Refs & Annos)

Chapter 9. Federal Food, Drug, and Cosmetic Act (Refs & Annos)

Subchapter II. Definitions (Refs & Annos)

§ 321a. "Butter" defined

For the purposes of the Food and Drug Act of June 30, 1906 (Thirty-fourth Statutes at Large, page 768) "butter" shall be understood to mean the food product usually known as butter, and which is made exclusively from milk or cream, or both, with or without common salt, and with or without additional coloring matter, and containing not less than 80 per centum by weight of milk fat, all tolerances having been allowed for.



DAIRY PRODUCT PRICES BUTTER

Week Ending Saturday _____



**NATIONAL
AGRICULTURAL
STATISTICS
SERVICE**

National Agricultural Statistics Service
U.S. Department of Agriculture,
Rm 5030, South Building
1400 Independence Ave., S.W.
Washington, DC 20250-2000
Phone: 1-800-727-9540
Fax: 202-690-2050
Email: nass@nass.usda.gov

Dear Butter Producer:

USDA is collecting weekly information on butter sales and prices to be published in the Dairy Products Prices Release every Friday. Your cooperation in filling out this form and returning it is requested. Response to this survey is **mandatory under Public Law No. 106-532**. The information that you provide is important in estimating U.S. butter prices. **Individual reports will be considered confidential and will not be used in a way as to disclose company proprietary information.** Please "fax" the report promptly.

Please make corrections to name, address and Zip Code, if necessary.

INSTRUCTIONS:

Sale:

When a transaction is completed, i.e. butter is "shipped out" and title transfer occurs.
Report sales of butter that meets USDA Grade AA standards, 80% butterfat, salted, fresh or storage.
Price is **f.o.b.** processing plant/storage center.
Report prices and quantities for all 25 kilogram and 68 pound box sales.
Report sales quantities in total pounds.

Include:

Total volume sold and total dollars received or price per pound.
CME Sales: Initial manufacturer sales only.
CCC purchases under the Dairy Price Support and related programs

Exclude:

Transportation and clearing charges from price.
Unsalted and Grade A butter.
Intra-company sales.
Resales of purchased butter.
Forward pricing sales: sales in which the selling price was set (and not adjusted) 30 or more days before the transaction was completed. This exclusion does not include sales through the Dairy Export Incentive Program (DEIP).

If you have any questions, please call 202-690-2168.

BUTTER SALES for the WEEK ENDING SATURDAY _____				
1. PLANT LOCATION	POUNDS OF BUTTER		TOTAL DOLLARS OR	DOLLARS / LB.
	211	lb.	221\$	231\$
	212	lb.	222\$	232\$
	213	lb.	223\$	233\$
	214	lb.	224\$	234\$
	215	lb.	225\$	235\$

Reported by: _____ Phone: () _____ Date: _____
(Signature of authorized official)

information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(d) *Nomenclature.* The name of the food is "Sweetened condensed milk." The word "homogenized" may appear on the label if the food has been homogenized. The name of the food shall include a declaration of the presence of any characterizing flavoring, as specified in § 101.22 of this chapter.

(e) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[43 FR 21670, May 19, 1978, as amended at 47 FR 11823, Mar. 19, 1982; 49 FR 10091, Mar. 19, 1984; 54 FR 24892, June 12, 1989; 58 FR 2890, Jan. 6, 1993]

§ 131.125 Nonfat dry milk.

(a) *Description.* Nonfat dry milk is the product obtained by removal of water only from pasteurized skim milk. It contains not more than 5 percent by weight of moisture, and not more than 1½ percent by weight of milkfat unless otherwise indicated.

(b) *Optional ingredients.* Safe and suitable characterizing flavoring ingredients (with or without coloring and nutritive carbohydrate sweetener) as follows:

(1) Fruit and fruit juice, including concentrated fruit and fruit juice.

(2) Natural and artificial food flavorings.

(c) *Methods of analysis.* The following referenced methods of analysis are from "Official Methods of Analysis of the Association of Official Analytical Chemists," 13th Ed. (1980), which is incorporated by reference. Copies may be obtained from the AOAC INTERNATIONAL, 481 North Frederick Ave., suite 500, Gaithersburg, MD 20877, or may be examined at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(1) Milkfat content—"Fat in Dried Milk—Official Final Action," sections 16.199-16.200.

(2) Moisture content—"Moisture—Official Final Action," section 16.192.

(d) *Nomenclature.* The name of the food is "Nonfat dry milk". If the fat content is over 1½ percent by weight, the name of the food on the principal display panel or panels shall be accompanied by the statement "Contains % milkfat", the blank to be filled in with the percentage to the nearest one-tenth of 1 percent of fat contained, within limits of good manufacturing practice. The name of the food shall include a declaration of the presence of any characterizing flavoring, as specified in § 101.22 of this chapter.

(e) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[42 FR 14360, Mar. 15, 1977, as amended at 43 FR 19636, May 9, 1978; 47 FR 11823, Mar. 19, 1982; 49 FR 10091, Mar. 19, 1984; 54 FR 24892, June 12, 1989; 58 FR 2890, Jan. 6, 1993]

§ 131.127 Nonfat dry milk fortified with vitamins A and D.

(a) *Description.* Nonfat dry milk fortified with vitamins A and D conforms to the standard of identity for nonfat dry milk, except that vitamins A and D are added as prescribed by paragraph (b) of this section.

(b) *Vitamin addition.* (1) Vitamin A is added in such quantity that, when prepared according to label directions, each quart of the reconstituted product contains 2000 International Units thereof.

(2) Vitamin D is added in such quantity that, when prepared according to label directions, each quart of the reconstituted product contains 400 International Units thereof.

(3) The requirements of this paragraph will be deemed to have been met if reasonable overages, within limits of good manufacturing practice, are present to ensure that the required levels of vitamins are maintained throughout the expected shelf life of the food under customary conditions of distribution.



**DAIRY PRODUCTS PRICES
NONFAT DRY MILK**
Week Ending Saturday _____



**NATIONAL
AGRICULTURAL
STATISTICS
SERVICE**

National Agricultural Statistics Service
U.S. Department of Agriculture,
Rm 5030, South Building
1400 Independence Ave., S.W.
Washington, DC 20250-2000
Phone: 1-800-727-9540
Fax: 202-690-2090
Email: nass@nass.usda.gov

Dear Nonfat Dry Milk Producer:

USDA is collecting weekly information on nonfat dry milk sales and prices to be published in the Dairy Products Prices Release every Friday. Your cooperation in filling out this form and returning it is requested. Response to this survey is **mandatory** under **Public Law No. 106-532**. The information that you provide is important in estimating U.S. nonfat dry milk prices. **Individual reports will be considered confidential and will not be used in a way as to disclose company proprietary information.** Please "fax" the report promptly.

Please make corrections to name, address and Zip Code, if necessary.

INSTRUCTIONS

Sale:

When a transaction is completed, i.e. nonfat dry milk is "shipped out" and title transfer occurs.
Report sales of USDA Extra Grade and USPH Grade A, nonfortified nonfat dry milk.
Price is **f.o.b.** processing plant/storage center.
Report prices and quantities for all 25 kilogram bag, 50 pound bag, tote and tanker sales.
Report sales quantities in total pounds.

Include:

Nonfat dry milk manufactured using low or medium heat process.
Total volume sold and total dollars received or price per pound.
CME Sales initial manufacturer sales only.
CCC purchases under the Dairy Price Support and related programs.

Exclude:

Transportation and clearing charges from price.
Sales of nonfat dry milk more than 180 days old.
Nonfat dry milk manufactured using high heat process.
Sales of instant nonfat dry milk.
Sales of dry buttermilk products.
Intra-company sales.
Resales of purchased nonfat dry milk.
Forward pricing sales: sales in which the selling price was set (and not adjusted) 30 or more days before the transaction was completed. This exclusion does not include sales through the Dairy Export Incentive Program (DEIP).

If you have any questions, please call 202-690-2168.

NONFAT DRY MILK SALES for the WEEK ENDING SATURDAY _____			
1. PLANT LOCATION	POUNDS OF NONFAT DRY MILK	TOTAL DOLLARS	OR DOLLARS / LB.
	411 lb.	421 \$	431 \$
	412 lb.	422 \$	432 \$
	413 lb.	423 \$	433 \$
	414 lb.	424 \$	434 \$
	415 lb.	425 \$	435 \$

Reported by: _____ Phone: () _____ Date: _____
(Signature of authorized official)

DAIRY MARKET NEWS TERMINOLOGY

Over the years, those engaged in the marketing of dairy products have developed a language peculiar to the trade. Numerous terms and phrases having special meanings are in frequent use. Market reports are intended to convey useful information to readers regarding important phases of a market situation and are best understood by the trade if words and expressions employed are in common usage. The following terms, definitions and abbreviations are used in describing dairy markets and market situations.

AMS - Agricultural Marketing Service: An agency of the U.S. Department of Agriculture. This Agency's responsibilities include administering marketing order programs, standardization, inspection and grading, market news, and the research and promotion programs.

BULK BUTTER - Packed 68 pounds or 25 KG, net weight, in corrugated boxes.

BUTTERFAT / MILKFAT - The fat portion of whole milk.

CCC - Commodity Credit Corporation: An agency of the U.S. Department of Agriculture. This Agency's responsibilities include conducting price support purchases and related activities, involving expenditures of funds under powers granted by the Congress to CCC. The Secretary of Agriculture and other Department officials serve as officers of the Corporation.

ADJUSTED PURCHASES - Total purchases, contract basis, less/plus contract adjustments.

FISCAL/MARKETING YEAR - October 1 through September 30.

MANUFACTURING ALLOWANCES - CCC's estimate of the average amount per hundredweight needed by plants to cover manufacturing costs (fuel, labor, equipment, packaging, etc.) to convert whole milk into cheese or butter and nonfat dry milk. This allowance is used in determining the CCC purchase price which will enable manufacturers to return to the dairy farmers, on a national average basis, the Government support price. Manufacturing allowances are also used in the calculation of class prices.

MILK EQUIVALENT - The equivalent pounds of whole milk containing a specific percentage of milkfat--usually 3.67 percent--used in the production of manufactured dairy products. One method for computing milk equivalent is to multiply the volume of specific manufactured dairy products by a conversion factor derived from the yield of the product from a hundredweight of milk at the specified milkfat percent.

FAT SOLIDS BASIS: factors used: butter, 21.8; cheese, 9.23; and nonfat dry milk, 0.22.

SKIM SOLIDS BASIS: factors used: butter, 0.12; cheese, 9.90; and nonfat dry milk, 11.64.

NET PURCHASES / REMOVALS - referred to interchangeably as CCC, USDA, or Government removals or net purchases. Surplus milk bought by the CCC under the support price program in the form of butter, cheese, and nonfat dry milk, less cancellations and sales to the trade for unrestricted use.

PURCHASE PRICES - Announced prices that CCC pays under the price support program for butter, cheese and nonfat dry milk.

REGIONS - East, Central, and West. The regions consist of the following states:

EAST - Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, and West Virginia.

CENTRAL - Alabama, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas, and Wisconsin.

WEST - Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

SELLBACK PRICES - The prices determined by CCC at which the government will sell dairy products back to the trade.

RESTRICTED USE - Sales of CCC commodities restricted to a specific use, such as animal feed.

UNRESTRICTED USE - Sales of CCC commodities that may be used for any purpose. These sales are made at both announced and competitive prices.

DAIRY MARKET NEWS TERMINOLOGY

SUPPORT PRICE FOR MILK - The price set by the Secretary of Agriculture (since October 21, 1981, the support price has been established by Congress) which is in compliance with the requirements of the Agricultural Act of 1949, as amended, for the milk price support program. The support price is a price goal - a national average price for milk of national average milkfat content that USDA hopes to see realized in the marketplace. CCC purchase prices are calculated to provide to milk processors who buy manufacturing grade milk, sufficient revenue to pay producers the support price. CCC does not guarantee that farmers will receive that price.

UNCOMMITTED INVENTORIES - Stocks held by CCC which have not been committed for sale or donation.

CIF - Cost, Insurance, and Freight.

COLD STORAGE HOLDINGS - Products normally held for 30 days or more in public, private, and semiprivate refrigerated storage facilities. Does not include products in wholesalers' and retailers' storage facilities, which are normally held less than 30 days.

COMMERCIAL DISAPPEARANCE - Commercial disappearance includes civilian and military purchases of milk and dairy products for domestic and foreign use, but excludes farm household use and USDA donations of dairy products. Disappearance is a residual figure and therefore can be affected by any inaccuracies in estimating milk production, on-farm use, stocks, and imports.

COMMERCIAL STOCKS - Total U.S. stocks or holdings, minus Government-owned stocks or holdings.

COMPONENT PRICE AND PRODUCT PRICE FORMULAS: Class Prices are derived from National Agricultural Statistic Service average monthly weighted prices of NDM, whey, butter, block, and barrel cheese. Replaced the Basic Formula Price (BFP) in January 2000.

COMPONENT PRICE - Value of milk's major components - butterfat, nonfat solids, or protein and other solids. Derived from the NASS price of the major dairy product made from the component - butter, NDM, block or barrel cheese and whey.

CONTRACT SALES - Contract sales (oral or written) include product that is earmarked for a regular established outlet. The contract may cover a specified period of time or volume. The price may be fixed or based on negotiated differentials over or under some base price or index.

DAIRY MARKET NEWS - DMN: A program administered by USDA, Agricultural Marketing Service, collects and provides timely and accurate information pertaining to supply and demand conditions for milk and dairy products. Provide the industry information to help make current buying and selling decisions and aid in future planning.

DMN REGIONS:

DOMESTIC:

CENTRAL - Arkansas, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Texas, and Wisconsin

NORTHEAST - Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont

SOUTHEAST - Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia

WEST - Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming

INTERNATIONAL:

EASTERN EUROPE - Belarus, Bulgaria, Czechoslovakia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Ukraine

OCEANIA - Australia and New Zealand

WESTERN EUROPE (EU-15) - Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom

EU-25 - All EU-15 countries plus Poland, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Slovakia and Slovenia [as of May 2004].

DEIP - Dairy Export Incentive Program: A program administered by USDA, Foreign Agricultural Service, which helps exporters of U.S. dairy products compete on the world market.

DELIVERED EQUIVALENT - Prices are derived by using an f.o.b. price, plus an adjustment to reflect the cost of transporting the product to a specified area.

DAIRY MARKET NEWS TERMINOLOGY

DELIVERED PRICE - f.o.b. price plus transportation and handling.

DEMAND - The desire to possess a commodity, coupled with the willingness and ability to pay.

VERY GOOD - Offerings or supplies are rapidly being absorbed

GOOD - Firm confidence on the part of buyers that general market conditions are good. Trading is more active than normal.

MODERATE - Average buyer interest and trading.

LIGHT - Demand is below average.

VERY LIGHT - Few buyers are interested in trading.

ERS - Economic Research Service: An agency of the U.S. Department of Agriculture. This Agency's responsibilities include providing economic research and forecasting.

EX DOCK - Often seen as "Ex Doc, Duty Paid." Imported product that has cleared customs and all paperwork has been completed. Product is available for pickup by the buyer.

EXCHANGE - An organization which establishes and enforces rules of trade in a market (cash and futures markets). Terms used by DMN which are associated with Exchange trading.

BID - Refers to the price a buyer is willing to pay for a product. May raise the trading level.

CARLOAD - Chicago Mercantile Exchange - Cheese = 40,000 - 44,000 pounds

CARLOT - Chicago Mercantile Exchange - Butter = 40,000 - 43,000 pounds

NDM = 42,000 - 45,000 pounds

OFFER - Refers to the price an owner is willing to accept for a product. May lower the trading level.

SALE - A bid filled or an offer covered.

FAS - Foreign Agricultural Service: An agency of the U.S. Department of Agriculture. This Agency's responsibilities include providing foreign agricultural information, administering import regulations, and assisting in the export of U.S. farm products.

FEDERAL MILK ORDERS - Federal Milk orders are authorized by the Agricultural Marketing Agreement Act of 1937. Under this law, the Secretary of Agriculture may establish Federal Orders that apply to buyers (handlers) of milk. Basically, a milk order is a legal document issued to regulate the minimum prices paid to dairy farmers by handlers of Grade A milk in a specified marketing area. Milk under the Federal Milk order system is separated into four separate classes:

CLASS I - milk used for beverages including eggnog and ultra high temperature (UHT) milk.

CLASS II - milk used for soft products. This includes cottage cheese, ricotta cheese, pot cheese, Creole cheese, milk shake and ice milk mixes, frozen desserts, aerated cream, frozen cream, sour cream, half-n-half, yogurt, custards, puddings, pancake mixes, batter, buttermilk biscuit mixes, infant or dietary formulas packaged in hermetically sealed containers, candy, soup and bakery products for general distribution to the public including sweetened condensed milk used for manufacture of aforesaid products, and fluid cream or any product containing artificial fat or fat substitutes that resemble fluid cream.

CLASS III - milk used in the manufacture of cream cheese and other spreadable cheeses, and hard cheese of types that may be shredded, grated, or crumbled. It also includes plastic cream, anhydrous milkfat, and butteroil.

CLASS IV - milk used to produce butter, any milk product in dry form and evaporated or sweetened condensed milk in a consumer-type package.

FDA - Food and Drug Administration: An agency of the U.S. Department of Health and Human Services.

FLUID GRADE MILK (GRADE A) - Milk eligible for sale for use in fluid milk products. This milk must be produced under strict sanitary conditions which meet U.S. Public Health standards. Fluid grade milk may be used to make manufactured dairy products.

F.O.B. - Free on Board: Seller places product sold in a railcar, truck, or other form of transportation. The buyer then assumes transportation costs.

FSA - Farm Service Agency (formerly ASCS): An agency of the U.S. Department of Agriculture. This Agency's responsibilities include administering the dairy and other farm commodity price support programs.

FUTURES TERMS - several common terms used by traders in futures markets.

CHICAGO MERCANTILE EXCHANGE - CME

DAIRY MARKET NEWS TERMINOLOGY

CFTC - The Commodity Futures Trading Commission as created by the Commodity Futures Trading Commission Act of 1974. This government agency currently regulates the nation's commodity futures industry.

CONTRACT - Unit of trading for a commodity future. Also, actual bilateral agreement between the parties (buyer and seller) of a futures or option on futures transaction as defined by an exchange.

CONTRACT MONTH - The month in which futures contracts may be satisfied by making or accepting delivery.

DELIVERY - The tender and receipt of an actual commodity or cash in settlement of a futures contract.

LONG - An investor expecting a futures price to increase may decide to go long or buy a futures contract.

SHORT - An investor expecting a futures price to decline may go short or sell a futures contract.
OPEN INTEREST - Total number of futures or options on futures contracts that have not yet been offset or fulfilled by delivery. An indicator of the depth or liquidity of a market (the ability to buy or sell at or near a given price) and of the use of a market for risk and/or asset management.

SETTLEMENT PRICE - A figure determined by the closing range that is used to calculate gains and losses in futures market accounts. Settlement prices are used to determine gains, losses, margin calls, and invoice prices for deliveries.

VOLUME - The number of transactions in a futures or options on futures contract made during a specified period of time.

LTL - Less than truckload quantity.

MANUFACTURING GRADE MILK (GRADE B) - Milk eligible for sale for which use is limited to manufactured dairy products. This milk must be produced under conditions which meet state and local standards, but these standards are less stringent than those for fluid grade milk (Grade A).

MARKET - A term with several meanings:

- A. A geographic location where a commodity is traded.
- B. The price, or price level, at which a commodity is traded.
- C. To sell a commodity.

MARKET ACTIVITY - The rate at which sales are being made. Often stated as: active, moderate, slow, or inactive.

MARKET CHANNELS:

BROKER/TRADER - A middleman activity involved in facilitating sales between producers and other levels in the marketing chain. Typically does not take title to product.

FOOD SERVICE - A marketing channel which includes purchases of dairy products by hotels, restaurants, fast food outlets, schools, and institutions.

INDUSTRIAL - A marketing channel which includes dairy products purchased as an ingredient in the production of food and nonfood products.

JOBBER - A middleman activity in food distribution involving the transfer of products between wholesalers or manufacturers and end use outlets. Jobbing sales are usually on a small scale and jobbers provide special services to small food stores, restaurants, and institutions. Typically takes title to product.

RETAIL - A marketing channel which sells dairy products directly to the consumer for personal or household consumption.

WHOLESALE - A middle link in the food distribution chain. Wholesalers assemble relatively large quantities of product and resell in smaller lots to various users such as the food service trade, small retail food stores, and jobbers. Major functions may include assembling, grading, warehousing, order taking, cutting, wrapping, printing, and delivery. Customer services such as merchandising aids and credit also may be provided.

METRIC CONVERSIONS:

KG / KILOGRAM = 2.2 pounds

MT / METRIC TON = 2,204.6 pounds

DAIRY MARKET NEWS TERMINOLOGY

MILC - Milk Income Loss Contracts

MPC - Milk protein concentrate

MOSTLY - The majority of sales within a reported price range. Transaction driven not volume weighted

NA - Not available.

NASS - National Agricultural Statistics Service: An agency of the U.S. Department of Agriculture. This Agency's responsibilities include providing official USDA data and estimates of agricultural prices, dairy products, milk production, cold storage, and other items.

NC - No change.

NDM - Nonfat Dry Milk - See USDA standards.

NOMINAL PRICES - Prices that reflect buyers' and sellers' opinions of current values (bids, offers, grade, and regional differentials, etc.) when there is limited trading of a commodity. Ordinarily, published prices are based on three or more separate, actual spot transactions. However, because of the practical uses made of pricing information by buyers and sellers, nominal prices are used to indicate where spot trades would occur. If a reporter is unable to gather enough information for nominal prices, then prices are reported as too few to report (TFEWR).

PRICE TREND - The direction in which prices are moving in relation to trading in the previous reporting period(s).

HIGHER - The majority of sales are at prices measurably higher than the previous trading session.

FIRM - Prices are tending higher, but not measurably so.

STEADY - Prices are unchanged from the previous trading session.

WEAK - Prices are tending lower, but not measurably so.

LOWER - Prices for most sales are measurably lower than the previous trading session.

PRINT BUTTER - Butter which is packaged in one-pound or smaller pieces.

PRODUCT PRICE FORMULAS - Used to compute minimum class prices under federal milk orders. Consist of product prices, make allowances, and yield factors. Product prices are those collected weekly by NASS for butter, NDM, block and barrel cheese and dry whey. Replaced BFP in January 2000.

RAILCAR = approximately 130,000 to 160,000 pounds

RESALE PRICES - Transactions that reflect product that has been purchased and resold (can be more than once). Trades can occur above, below, or at spot prices depending on current market conditions. These trades are not reported in spot price ranges but may be included in comments.

SMP - Skim Milk Powder

1. An international market term often used interchangeably for NDM.

2. A term used in the U.S. for a dry product made from a blend of condensed skim and another condensed dairy product(s) generally for export sales. This product does not meet USDA standards for NDM.

SOLIDS-NOT-FAT (SNF) - The solids in milk other than milkfat. Also known as nonfat solids.

SPOT PRICES - The first sale, f.o.b. the producing plant, of product that has no regular or committed outlet and is sold on the open market for immediate delivery or delivery within a few days. Sales to CCC under the price support program are included with spot trades.

SUPPLY/OFFERING - The quantity of a particular item available for current sale.

HEAVY - When the volume of supplies is above average for the market being reported.

MODERATE - When the volume of supplies is average for the market being reported.

LIGHT - When the volume of supplies is below average for the market being reported.

TFEWR - Too few to report - insufficient market information to determine a price.

TL - Truckload = approximately 40,000 - 44,000 pounds

UNDERTONE/TONE - Situation or sense of market direction.

USPHS - United States Public Health Service: An agency of the U.S. Department of Health and Human Services. This agency's responsibilities include the promulgation and administration of Federal standards of identity (which define milk and dairy products) and administering the fluid Grade A milk program (which covers the sanitary aspects of milk and processing).

WET SOLIDS - another term for condensed skim.



DAIRY PRODUCTS PRICES DRY WHEY

Week Ending Saturday _____



**NATIONAL
AGRICULTURAL
STATISTICS
SERVICE**

National Agricultural Statistics Service
U.S. Department of Agriculture,
Rm 5030, South Building
1400 Independence Ave., S.W.
Washington, DC 20250-2000
Phone: 1-800-727-9540
Fax: 202-690-2090
Email: nass@nass.usda.gov

Dear Dry Whey Producer:

USDA is collecting weekly information on dry whey sales and prices to be published in the Dairy Products Prices Release every Friday. Your cooperation in filling out this form and returning it is requested. Response to this survey is **mandatory** under Public Law No. 106-532. The information that you provide is important in estimating U.S. dry whey prices. **Individual reports will be considered confidential and will not be used in a way as to disclose company proprietary information.** Please "fax" the report promptly.

Please make corrections to name, address and Zip Code, if necessary.

INSTRUCTIONS

Sale:

When a transaction is completed, i.e. dry whey is "shipped out" and title transfer occurs.
Report sales of USDA Extra Grade edible nonhygroscopic dry whey.
Price is **f.o.b.** processing plant/storage center.
Report prices and quantities for all 25 kilogram bag, 50 pound bag, tote and tanker sales.
Report sales quantities in total pounds.

Include:

Total volume sold and total dollars received or price per pound.

Exclude:

Transportation charges from price.
Sales of Grade A dry whey.
Sales of dry whey more than 180 days old.
Intra-company sales.
Resales of purchased dry whey.
Forward pricing sales: sales in which the selling price was set (and not adjusted) 30 or more days before the transaction was completed.

If you have any questions, please call 202-690-2168.

DRY WHEY SALES for the WEEK ENDING SATURDAY _____			
1. PLANT LOCATION	POUNDS OF DRY WHEY	TOTAL DOLLARS	OR DOLLARS / LB.
	311 lb.	321 \$	331 \$
	312 lb.	322 \$	332 \$
	313 lb.	323 \$	333 \$
	314 lb.	324 \$	334 \$
	315 lb.	325 \$	335 \$

Reported by: _____ Phone: () _____ Date: _____
(Signature of authorized official)

flavors; is free from any undesirable tastes and odors.

(b) *Body and texture.* Shall have a reasonably medium-firm smooth and velvety body and free from uncooked cheese particles. Is resilient and not tough, brittle, short or sticky. It shall be free from pin holes or openings except those caused by trapped steam. The product shall slice freely with only a slight amount of sticking and shall not break when cut into approximately $\frac{1}{8}$ inch slices. If in sliced form, the slices shall separate readily.

(c) *Color.* May be colored or uncolored but shall be uniform throughout. If colored it shall be bright and not be dull or faded. To promote uniformity and a common reference to describe color use the color designations as depicted by the National Cheese Institute standard color guide for cheese.

(d) *Finish and appearance.* The wrapper may be slightly wrinkled but shall envelop the cheese, adhere closely to the surface, and be completely sealed and not broken or soiled.

§ 58.738 Pasteurized process cheese spread and related products.

Shall conform to the applicable provisions of the Definitions and Standards of Identity for Pasteurized Process Cheese Spreads, Food and Drug Administration. The pH of pasteurized process cheese spreads shall not be below 4.0.

The quality of pasteurized process cheese spreads shall be determined on the basis of flavor, body and texture, color, and finish and appearance.

(a) *Flavor.* Has a pleasing and desirable cheese taste and odor characteristic of the variety or varieties of cheese ingredients used. If additional optional ingredients are used they shall be incorporated in accordance with good commercial practices and the flavor imparted shall be pleasing and desirable. May have a slight cooked, acid, or emulsifier flavor; is free from any undesirable tastes and odors.

(b) *Body and texture.* Shall have a smooth body free from uncooked cheese particles and when packaged shall form into a homogeneous plastic mass, and be free from pin holes or openings except those caused by

trapped steam. Product made for slicing shall slice freely when cut into approximately $\frac{1}{8}$ inch slices with only a slight amount of sticking. Product made for spreading shall be spreadable at approximately 70 °F.

(c) *Color.* May be colored or uncolored but shall be uniform throughout. If colored it shall be bright and not be dull or faded. To promote uniformity and a common reference to describe color the color designations as depicted by the National Cheese Institute standard color guide for cheese may be used.

(d) *Finish and appearance.* Wrappers, if used, may be slightly wrinkled but shall envelop the cheese, adhere closely to the surface, and be completely sealed and not broken or soiled. Other containers made of suitable materials shall be completely filled, sealed and not broken or soiled.

SUPPLEMENTAL SPECIFICATIONS FOR PLANTS MANUFACTURING, PROCESSING, AND PACKAGING WHEY, WHEY PRODUCTS AND LACTOSE

DEFINITIONS

§ 58.805 Meaning of words.

For the purpose of the regulations in this subpart, words in the singular form shall be deemed to impart the plural and vice versa, as the case may demand. Unless the context otherwise requires, the following terms shall have the following meaning:

(a) *Whey.* "Whey" is the fluid obtained by separating the coagulum from milk, cream, and/or skim milk in cheesemaking. The acidity of the whey may be adjusted by the addition of safe and suitable pH adjusting ingredients. Moisture removed from cheese curd as a result of salting may be collected for further processing as whey if the collection of the moisture and the removal of the salt from the moisture are conducted in accordance with procedures approved by the Administrator.

(b) *Dry Whey.* "Dry Whey" is the product resulting from drying fresh whey which has been pasteurized and to which nothing has been added as a preservative. It contains all constituents, except moisture, in the same relative proportions as in the whey.

§ 58.806

(c) *Dry Sweet Whey*. Dry whey not over 0.16 percent titratable acidity on a reconstituted basis.

(d) *Dry Whey—% Titratable Acidity*. Dry whey over 0.16 percent, but below 0.35 percent titratable acidity on a reconstituted basis. The blank being filled with the actual acidity.

(e) *Dry Acid Whey*. Dry whey with 0.35 percent or higher titratable acidity on a reconstituted basis.

(f) *Modified Whey Products*:

(1) Partially demineralized whey,

(2) Partially delactosed whey,

(3) Demineralized whey, and

(4) Whey protein concentrate-products defined by regulations of the Food and Drug Administration.

(g) *Lactose (milk sugar)*. That food product defined by regulations of the Food and Drug Administration.

[40 FR 47911, Oct. 10, 1975. Redesignated at 42 FR 32514, June 27, 1977, as amended at 46 FR 1257, Jan. 6, 1981. Redesignated at 46 FR 63203, Dec. 31, 1981, as amended at 55 FR 39912, Oct. 1, 1990]

ROOMS AND COMPARTMENTS

§ 58.806 General.

Dry storage of product, packaging room for bulk product, and hopper or dump room shall meet the requirements of §§ 58.210 through 58.212 as applicable.

EQUIPMENT AND UTENSILS

§ 58.807 General construction, repair and installation.

All equipment and utensils necessary for the manufacture of whey, whey products and lactose shall meet the same general requirements for materials and construction as outlined in §§ 58.128 and 58.215 through 58.230 as applicable, except for the following:

(a) *Modified Whey Products*. Equipment for whey fractionation, such as ultrafiltration, reverse osmosis, gel filtration, and electrodialysis shall be constructed in accordance with 3-A sanitary design principles, except where engineering requirements preclude strict adherence to such standards. Materials used for product contact surfaces shall meet applicable 3-A Sanitary Standards or Food and Drug Administration requirements. All

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equipment shall be of sanitary construction and readily cleanable.

(b) *Lactose*. Equipment used in the further processing of lactose following its separation from whey shall have smooth surfaces, be cleanable, free from cracks or crevices, readily accessible for inspection and shall be constructed of non-toxic material meeting applicable Food and Drug Administration requirements and under conditions of use shall be resistant to corrosion, pitting or flaking. [The use of stainless steel is optional.]

QUALITY SPECIFICATIONS FOR RAW MATERIALS

§ 58.808 Whey.

Whey for processing shall be fresh and originate from the processing of products made from milk meeting the requirements as outlined in §§ 58.132 through 58.138. Only those ingredients approved by the Food and Drug Administration may be added to the whey for processing, except when restricted by this subpart. Whey products to which approved ingredients have been added or constituents removed to alter original characteristics for processing or usage shall be labeled to meet the applicable requirements.

OPERATIONS AND OPERATING PROCEDURES

§ 58.809 Pasteurization.

(a) All fluid whey used in the manufacture of dry whey, dry whey products, modified whey products, and lactose shall be pasteurized prior to condensing. When the condensing and drying operations for dry whey take place at the same plant, the pasteurization may be located at a different point in the operation provided it will protect the quality of the finished product and not adversely affect the processing procedure.

(b) Pasteurized products transported to another plant for final processing shall be repasteurized, except that condensed whey containing 40 percent or more solids may be transported to another plant for further processing into dry whey, dry whey products or lactose without repasteurization.

1. **Van Slyke Formula**

a. Pounds of Cheese yield =

$$((BR\% \times BF \text{ lbs}) + (CS\% \times PR \text{ lbs}) - 0.1) \times 1.09 / (1 - \text{Moisture}\%)$$

b. Pounds of Cheese from Butterfat =

$$(BR\% \times BF \text{ lbs}) \times 1.09 / (1 - \text{Moisture}\%)$$

c. Pounds of Cheese from Protein =

$$((CS\% \times PR \text{ lbs}) - 0.1) \times 1.09 / (1 - \text{Moisture}\%)$$

Sensitivity of Class, Component, and Blend Prices to Various Change in Cheese to Protein Formula

Table 1
Sensitivity of Class, Component, and Blend Prices to Changes in BF Recovery

BF Recovery		90%	91%	92%	93%	94%	95%	96%	97%	98%	99%	100%
Cheese to Protein												
	lb	0	0.023	0.044	0.067	0.090	0.111	0.134	0.155	0.178	0.199	0.222
Class I at Std	cwt	0	0.068	0.132	0.200	0.268	0.332	0.400	0.464	0.532	0.597	0.665
Class III at Std	cwt	0	0.068	0.132	0.200	0.268	0.332	0.400	0.464	0.532	0.597	0.665
Class I at Test	cwt	0	0.069	0.134	0.203	0.272	0.338	0.407	0.472	0.541	0.606	0.675
Class III at Test	cwt	0	0.068	0.132	0.200	0.268	0.332	0.399	0.464	0.531	0.595	0.663
Blend	cwt	0	0.027	0.052	0.078	0.105	0.130	0.157	0.182	0.209	0.234	0.260

Table 2
Sensitivity of Class, Component, and Blend Prices to Changes in Casein as Percent of True Protein

Casein % True Protein		82.2	82.3%	82.4%	82.5%	82.6%	82.7%	82.8%	82.9%	83.0%	83.1%	83.2%
Cheese to Protein												
	lb	0	0.002	0.004	0.006	0.008	0.010	0.012	0.014	0.015	0.017	0.019
Class I at Std	cwt	0	0.006	0.013	0.019	0.023	0.029	0.035	0.042	0.045	0.052	0.058
Class III at Std	cwt	0	0.006	0.013	0.019	0.023	0.029	0.035	0.042	0.045	0.052	0.058
Class I at Test	cwt	0	0.007	0.013	0.020	0.023	0.030	0.036	0.043	0.046	0.052	0.059
Class III at Test	cwt	0	0.006	0.013	0.019	0.023	0.029	0.035	0.042	0.045	0.052	0.058
Blend	cwt	0	0.003	0.005	0.008	0.009	0.011	0.014	0.016	0.018	0.020	0.023

Table 3
Sensitivity of Class, Component, and Blend Prices to Changes in Fat to True Protein Ratio

BF Recovery		1.17	1.18	1.19	1.20	1.21	1.22	1.23
Cheese to Protein								
	lb	0	0.005	0.010	0.016	0.021	0.026	0.031
Class I at Std	cwt	0	0.016	0.031	0.047	0.062	0.078	0.093
Class III at Std	cwt	0	0.016	0.031	0.047	0.062	0.078	0.093
Class I at Test	cwt	0	0.016	0.032	0.047	0.063	0.079	0.095
Class III at Test	cwt	0	0.016	0.031	0.047	0.062	0.078	0.093
Blend	cwt	0	0.006	0.012	0.018	0.024	0.030	0.037

Sensitivity of Class, Component, and Blend Prices By Changes to BF Recovery, Casein Percent, and Fat to Casein Ratio

04/06/07

BF Recovery
 BF Amount
 Casein Percent
 Protein Amount
 Moisture
 Cheese Yield from Butter
 Lbs. Cheddar Cheese / 1 Lb BF
 Lbs. Cheddar Cheese / 3.5 Lb BF
 Pounds of Cheese/lb of protein
 Cheese yield from protein
 Product Price
 Make Allowance
 Net Per Pound
 Product Yield
 Product Price
 Make Allowance
 Net Per Pound
 Cheese from Butter yield
 Class III Butterfat
 Butterfat Price
 Butterfat Recovery
 Fractional pound of butter
 Class IV BF to Class III
 Fat to True Protein Ratio
 Protein Before Adjustment
 Adjustment to Protein
 Component Prices
 Diff

Butter to Butterfat		Cheese to Protein		NFDM to SNF		Solids	
Current	Changed	Current	Changed	Current	Changed	Current	Changed
		89.40%	89.40%				
		3.5	3.5				
		81.99%	83.10%				
		2.9915	2.9915				
		38.00%	38.00%				
		9.6375	9.6956				
		1.572	1.572				
		5.501	5.501				
		4.1365	4.1946				
		1.383	1.402				
		1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
1.2193	1.2193	0.1682	0.1682	0.1570	0.1570	0.1956	0.1956
0.1202	0.1202	1.0788	1.0788	0.7304	0.7304	0.1329	0.1329
1.0991	1.0991	1.383	1.402	0.99	0.99	1.03	1.03
1.20	1.20	1.247	1.247				
		0.1682	0.1682				
		1.0788	1.0788				
		1.572	1.572				
		1.6959	1.6959				
		1.3189	1.3189				
		0.9	0.9				
		1.1870	1.1870				
		0.5088	0.5088				
		1.17	1.17				
		1.4920	1.5125				
		0.5953	0.5953				
		1.3189	1.3189	2.0873	2.1078	0.7231	0.7231
		0.0000	0.0000			0.1369	0.1369
						0.0000	0.0000

Using Current Formula
 Based on Changes
 Difference

At Standard Tests			
Class I	Class II	Class III	Class IV
11.64	11.60	11.64	10.90
11.70	11.60	11.70	10.90
0.06	0.00	0.06	0.00

Using Current Formula
 Based on Changes
 Difference

Prices At Test Cwt				
Class I	Class II	Class III	Class IV	Blend
9.70	16.80	11.73	12.78	11.71
9.76	16.80	11.79	12.78	11.76
0.06	0.00	0.06	0.00	0.05

Using Current Formula
 Based on Changes
 Difference
 Per Avg \$/Producer

Dollars At Test (\$000,000)				
Class I	Class II	Class III	Class IV	Pool
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129
\$4,421	\$2,537	\$5,582	\$1,645	\$14,186
\$28	\$0	\$28	\$0	\$57
				\$1,103

BBB

Fact Sheet - Milk Protein Testing - FAQ's
Changing from Crude Protein to True Protein
David M. Barbano and Joanna M. Lynch
Cornell University, Ithaca, NY

May 14, 1999

What is the difference between crude protein and true protein?

Crude protein, sometimes called total protein, is estimated from measuring the total nitrogen content of milk. Nitrogen is multiplied by 6.38 to express the results on a protein equivalent basis. The total amount of nitrogen in milk, however, comes from both protein and non-protein nitrogen sources. True protein reflects only the nitrogen associated with protein and does not include the nitrogen from non-protein sources.

What is non-protein nitrogen?

This is a normal part of milk. The non-protein nitrogen (NPN) fraction is composed of urea and other low molecular weight nitrogen containing compounds such as creatine and creatinine. About 50% of the NPN in milk is urea, and variation in NPN is attributed primarily to variation in urea content. Non-protein nitrogen has little nutritional value and does not contribute to cheese yield. Therefore, it does not have the same economic value as "true" milk protein to either the processor or the consumer.

How much of the crude protein is NPN?

The amount of NPN in milk varies naturally, just like any other milk component. On average NPN represents approximately 6% of the total nitrogen. On an absolute basis, NPN accounts for about 0.19% of the "protein" in a crude protein value, but may range at the extremes between 0.12-0.25%.

How are crude protein and true protein measured?

Kjeldahl nitrogen analysis forms the basis for the reference tests for both crude and true protein. In both cases, nitrogen is multiplied by 6.38 to express the results on a protein equivalent basis.

Milk infrared analyzers are the most common testing instruments used for determination of protein for payment testing. They are calibrated using results from Kjeldahl reference testing. These instruments detect a signal generated from the protein molecules. In simple terms, the machines "see" protein but cannot see NPN substances.

Why change the basis for measurement of the protein concentration in milk from crude protein to true protein?

In the past, most electronic milk testing equipment were calibrated on a crude protein basis. This created problems because, although the NPN varied, the machine could not measure this variation. By calibrating on crude protein, a certain amount of error was inevitable when the machine attempted to predict something it could not measure. The direction and magnitude of these errors are not easily predicted, as NPN is not well correlated with either crude or true protein level.

These errors are eliminated when true protein is used as the basis for calibration because the electronic testing instruments can directly detect the protein signal.

Are there differences in NPN between farms? Between breeds?

Milk NPN levels are influenced primarily by farm management and feeding practices. Feeding practices

account for much of the variation in NPN observed between farms, regions and seasons. Any differences in NPN between breeds will be small compared to the effects of diet.

Will expressing protein as true protein rather than crude protein decrease my protein test?

On an absolute basis, yes.

Will the lower protein test decrease the milk price?

No. The value of protein will be increased to compensate for the decrease in protein. The change in test level in the Federal Milk Markets will be revenue neutral.

How do I compare my true protein tests to my previous crude protein records?

Add 0.19% to the true protein values to get an approximate estimate of crude protein.

You say that NPN levels can vary. So is adding a constant correction of 0.19% to estimate crude protein from true protein accurate?

Estimates of crude protein based on electronic milk testing have never been accurate with respect to the actual amount of NPN in milk, since this is not a component that the machine can measure. Adding a constant factor contributes no greater error than previously occurred when instruments were calibrated on a crude protein basis.

How will changing from crude protein to true protein influence genetic selection for protein production?

Using true protein will reduce the amount of random error in milk protein production data and improve the data quality for genetic selection. This will be an advantage for genetic selection for improved protein production in all breeds within the US. The actual value of protein production can be adjusted to a crude protein basis by adding 0.19% to the true protein test to make data comparable to historic data and data from other countries that still express milk protein on a crude protein basis.

Will this change in payment testing affect nutritional labeling?

No. Crude protein is the basis for nutritional labeling on an international basis.

Do any other countries express milk protein content for payment testing on a true protein basis?

Yes. France and Australia.

Please summarize the advantages of using true protein instead of crude protein.

Using true protein instead of crude protein will better reflect the economic value of milk protein. Additionally, it will improve the accuracy of payment testing for protein by eliminating sources of random error. This will result in more equitable and accurate protein tests, and improve the quality of data used for genetic selection and farm management.

**Comparison of Casein in Crude Protein to Implied
Casein in True Protein at Two Rates**

% Crude Protein	NPN	True Protein	% Casein in Crude Protein	Casein	% Casein in formula	Casein Implied in Formula	Implied less Actual	% Casein Proposed	Proposed Casein	Implied less Actual
	0.19		78.00%					83.25%		
2.90	0.19	2.71	78.00%	2.26	82.20%	2.23	-0.0344	83.25%	2.26	0.0059
2.95	0.19	2.76	78.00%	2.30	82.20%	2.27	-0.0323	83.25%	2.30	0.0033
3.00	0.19	2.81	78.00%	2.34	82.20%	2.31	-0.0302	83.25%	2.34	0.0007
3.05	0.19	2.86	78.00%	2.38	82.20%	2.35	-0.0281	83.25%	2.38	-0.0019
3.10	0.19	2.91	78.00%	2.42	82.20%	2.39	-0.0260	83.25%	2.42	-0.0046
3.15	0.19	2.96	78.00%	2.46	82.20%	2.43	-0.0239	<u>83.25%</u>	<u>2.46</u>	<u>-0.0072</u>
3.20	0.19	3.01	78.00%	2.50	82.20%	2.47	-0.0218	83.25%	2.51	-0.0098
3.25	0.19	3.06	78.00%	2.53	82.20%	2.52	-0.0197	83.25%	2.55	-0.0124
3.30	0.19	3.11	78.00%	2.57	82.20%	2.56	-0.0176	83.25%	2.59	-0.0151
3.35	0.19	3.16	78.00%	2.61	82.20%	2.60	-0.0155	83.25%	2.63	-0.0177
3.40	0.19	3.21	78.00%	2.65	82.20%	2.64	-0.0134	83.25%	2.67	-0.0203
3.45	0.19	3.26	78.00%	2.69	82.20%	2.68	-0.0113	83.25%	2.71	-0.0229
3.50	0.19	3.31	78.00%	2.73	82.20%	2.72	-0.0092	83.25%	2.76	-0.0256
3.55	0.19	3.36	78.00%	2.77	82.20%	2.76	-0.0071	83.25%	2.80	-0.0282
3.60	0.19	3.41	78.00%	2.81	82.20%	2.80	-0.0050	83.25%	2.84	-0.0308
3.65	0.19	3.46	78.00%	2.85	82.20%	2.84	-0.0029	83.25%	2.88	-0.0335
3.70	0.19	3.51	78.00%	2.89	82.20%	2.89	-0.0008	83.25%	2.92	-0.0361
<u>3.75</u>	<u>0.19</u>	<u>3.56</u>	<u>78.00%</u>	<u>2.92</u>	<u>82.20%</u>	<u>2.93</u>	<u>0.0013</u>	83.25%	2.96	-0.0387
3.80	0.19	3.61	78.00%	2.96	82.20%	2.97	0.0034	83.25%	3.01	-0.0413
3.85	0.19	3.66	78.00%	3.00	82.20%	3.01	0.0055	83.25%	3.05	-0.0439
3.90	0.19	3.71	78.00%	3.04	82.20%	3.05	0.0076	83.25%	3.09	-0.0466
3.95	0.19	3.76	78.00%	3.08	82.20%	3.09	0.0097	83.25%	3.13	-0.0492
4.00	0.19	3.81	78.00%	3.12	82.20%	3.13	0.0118	83.25%	3.17	-0.0518

DDD

**Comparison of Impact on Class, Component, and Blend
Prices by Changing the Percent of Casein in True Protein
to Current Formulas**

04/06/07

	Butter to Butterfat		Cheese to Protein		NFDM to SNF		Solids	
	Current	Changed	Current	Changed	Current	Changed	Current	Changed
Product Price	1.2193	1.2193	1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
Make Allowance	0.1202	0.1202	0.1682	0.1682	0.1570	0.1570	0.1956	0.1956
Net Per Pound	1.0991	1.0991	1.0788	1.0788	0.7304	0.7304	0.1329	0.1329
Product Yield	1.20	1.20	1.383	1.405	0.99	0.99	1.03	1.03
Product Price			1.247	1.247				
Make Allowance			0.1682	0.1682				
Net Per Pound			1.0788	1.0788				
Cheese from Butter yield			1.572	1.572				
Class III Butterfat			1.6959	1.6959				
Butterfat Price			1.3189	1.3189				
Butterfat Recovery			0.9	0.9				
Fractional pound of butter			1.1870	1.1870				
Class IV BF to Class III			0.5088	0.5088				
Fat to True Protein Ratio			1.17	1.17				
Protein Before Adjustment			1.4920	1.5157				
Adjustment to Protein			0.5953	0.5953				
Component Prices	1.3189	1.3189	2.0873	2.1111	0.7231	0.7231	0.1369	0.1369
Diff		0.0000		0.0237		0.0000		0.0000

At Standard Tests				
Class I	Class II	Class III	Class IV	
11.64	11.60	11.64	10.90	
11.71	11.60	11.71	10.90	
0.07	0.00	0.07	0.00	

Prices At Test Cwt					
Class I	Class II	Class III	Class IV	Blend	
9.70	16.80	11.73	12.78	11.71	
9.77	16.80	11.80	12.78	11.77	
0.07	0.00	0.07	0.00	0.05	

Dollars At Test (\$000,000)					
Class I	Class II	Class III	Class IV	Pool	
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129	
\$4,425	\$2,537	\$5,587	\$1,645	\$14,195	
\$33	\$0	\$33	\$0	\$66	

\$1,277

EEE

California
Department
of Food & Agriculture



Gray Davis, Governor
William (Bill) J. Lyons, Jr., Secretary

Dairy Marketing Branch
1220 N Street
Sacramento, CA 95814
(916) 341-5988
(916) 341-6697 Fax
dairy@cdfa.ca.gov

November 6, 2003

TO ALL INTERESTED PARTIES:

Enclosed are copies of the latest nonfat powder, bulk butter and Cheddar cheese processing costs for the period of January through December 2002. The processing cost data does not include the cost of raw product nor does it include any cost of marketing finished product.

For each of the three manufactured products, the cost data are presented in a table that shows actual weighted-average cost of plants grouped by efficiency. Also enclosed is a summary table showing the weighted-average manufacturing cost for nonfat powder, butter and Cheddar cheese as published since May 1989. Cost includes packaging, processing labor, processing non-labor, general and administrative cost, return on investment and, for butter and Cheddar cheese, miscellaneous ingredients.

Should you have any questions regarding this material, please contact Eric Erba or me at the telephone number or e-mail address above.

Sincerely,

Original signed by:

Edward Hunter
Supervising Auditor I

Enclosures

Visit our Website at
www.cdfa.ca.gov/dairy

**Weighted Average Manufacturing Costs
for Butter, Nonfat Powder and Cheddar Cheese
1989 - 2003**

Costs include processing labor, non-labor processing, packaging, other ingredients (for butter and Cheddar cheese only), general and administrative and return on investments.

<u>Date of Release</u>		<u>Butter</u>		<u>Nonfat Powder</u>		<u>Cheddar Cheese</u> ¹	
<u>Year</u>	<u>Month</u>	<u>Cost per Pound</u>	<u>Number of Plants</u>	<u>Cost per Pound</u>	<u>Number of Plants</u>	<u>Cost per Pound</u>	<u>Number of Plants</u>
1989	May	\$0.0879	11	\$0.1370	11	\$0.2251	9
1990	June	\$0.0888	11	\$0.1398	11	\$0.2324	9
1991	May	\$0.0883	10	\$0.1438	11	\$0.2192	9
1992	July	\$0.0969	12	\$0.1443	12	\$0.2010	9
1993	August	\$0.0936	12	\$0.1430	11	\$0.1868	10
1994	September	\$0.0895	11	\$0.1341	11	\$0.1889	8
1995	April	\$0.0889	9	\$0.1327	9	\$0.1862	8
1995	November	\$0.0928	9	\$0.1328	9	\$0.1981	8
1996	December	\$0.0970	9	\$0.1333	9	\$0.1898	8
1997	July	\$0.0958	8	\$0.1327	9	\$0.1840	9
1999	February	\$0.0930	8	\$0.1277	9	\$0.1759	10
2000	February	\$0.0957	8	\$0.1356	10	\$0.1693	9
2001	October ²	\$0.1001	8	\$0.1590	11	\$0.1802	9
2002	November ³	\$0.1208	7	\$0.1619	11	\$0.1775	9
2002	December ⁴	\$0.1211	7	\$0.1512	11	\$0.1746	9
2003	November ⁵	\$0.1235	7	\$0.1464	10	\$0.1632	9

¹ For the 1996 Cheddar cheese cost study and subsequent cost studies, we have included costs associated with Cheddar cheese plants producing 500 pound barrels and 640 pound blocks. However, costs for packaging labor and packaging expenses were replaced with the average of those costs associated with 40 pound block plants.

² Includes the cost studies completed for periods between January 1998 and December 1999 and adjusted for utility costs. The utility cost adjustments were made using each plant's invoices for energy costs for August 2001.

³ Includes the unadjusted cost studies for periods between July 2000 and December 2001.

⁴ Includes the cost studies for periods between July 2000 and December 2001 and adjusted for August 2002 utility invoices as well as 2002 data updating wages, payroll taxes and fringe benefits for all plants.

⁵ Includes the unadjusted cost studies for periods between January and December 2002.

Butter Processing Costs

Released November 2003

1. Manufacturing cost data were collected and summarized from 7 California butter plants. The 7 plants processed 381.8 million pounds of butter during the study period, representing 99.9% of the butter processed in California.
2. The processing costs summarized in this study were incurred during a 12-month period, starting in January 2002 and concluding in December 2002.
3. The "Processing Non-Labor" category includes costs such as utilities, repairs and maintenance, supplies, depreciation and rent.
4. The volume total includes both bulk butter and cut butter, but the costs reflect only costs for bulk butter (25 kg and 68 lb. blocks).
5. To obtain the weighted average, individual plant costs were weighted by their butter processing volume relative to the total volume of butter processed by all plants involved in the cost study.
6. The current manufacturing cost allowance for butter is \$0.132 per pound. About 69% of the butter was processed at a cost less than the manufacturing cost allowance.

<u>Cost Groups</u>	<u>Number of Plants</u>	<u>Processing Labor</u>	<u>Processing Non-Labor</u>	<u>Package</u>	<u>Other Ingredient</u>	<u>General & Administrative</u>	<u>Return on Investment</u>	<u>Total Cost</u>	<u>Volume in Group</u>	<u>Percent in Group</u>
<i>dollars per pound of butter</i>										
Low Cost	4	\$0.0410	\$0.0433	\$0.0092	\$0.0026	\$0.0136	\$0.0037	\$0.1134	264,454,994	69.3%
High Cost	3	\$0.0528	\$0.0576	\$0.0088	\$0.0047	\$0.0155	\$0.0068	\$0.1462	117,368,832	30.7%
<u>Summary Statistics</u>										
Weighted Average		\$0.0447	\$0.0477	\$0.0091	\$0.0032	\$0.0142	\$0.0046	\$0.1235		
Range {	Minimum	\$0.0367	\$0.0369	\$0.0072	\$0.0015	\$0.0063	\$0.0029			
	Maximum	\$0.1583	\$0.1330	\$0.0105	\$0.0054	\$0.0597	\$0.0073			
Total									381,823,826	100%

Nonfat Powder Processing Costs

Released November 2003

1. Manufacturing cost data were collected and summarized from 10 California nonfat powder plants. The 10 plants processed 749.6 million pounds of nonfat powder during the study period, representing 100% of the nonfat powder processed in California.
2. The processing costs summarized in this study were incurred during a 12-month period, starting in January 2002 and concluding in December 2002.
3. The "Processing Non-Labor" category includes costs such as utilities, repairs and maintenance, supplies, depreciation and rent.
4. The volume total includes all grades of nonfat powder packaged in any container size, but the costs reflect only costs for 25 kg and 50 lb. bags of nonfat powder.
5. To obtain the weighted average, individual plant costs were weighted by their nonfat powder processing volume relative to the total volume of nonfat powder processed by all plants involved in the cost study.
6. The current manufacturing cost allowance for nonfat powder is \$0.15 per pound. About 66% of the nonfat powder was processed at a cost less than the manufacturing cost allowance.

<u>Cost Groups</u>	<u>Number of Plants</u>	<u>Processing Labor</u>	<u>Processing Non-Labor</u>	<u>Package</u>	<u>General & Administrative</u>	<u>Return on Investment</u>	<u>Total Cost</u>	<u>Volume in Group</u>	<u>Percent in Group</u>
<i>dollars per pound of powder</i>									
Low Cost	3	\$0.0299	\$0.0717	\$0.0145	\$0.0087	\$0.0064	\$0.1312	341,369,050	45.5%
Medium Cost	4	\$0.0311	\$0.0885	\$0.0140	\$0.0115	\$0.0073	\$0.1524	380,810,900	50.8%
High Cost	3	\$0.0660	\$0.1379	\$0.0131	\$0.0232	\$0.0071	\$0.2473	27,371,984	3.7%
<u>Summary Statistics</u>									
Weighted Average		\$0.0319	\$0.0827	\$0.0142	\$0.0107	\$0.0069	\$0.1464		
Range {	Minimum	\$0.0248	\$0.0689	\$0.0123	\$0.0065	\$0.0037			
	Maximum	\$0.0885	\$0.1529	\$0.0148	\$0.0297	\$0.0124			
Total								749,551,934	100%

Manufacturing Cost Unit,
Ed Hunter, Supervising Auditor

Dairy Marketing Branch, CDFA

FFF

Cheese Processing Costs

Released November 2003

1. Manufacturing cost data were collected and summarized from 9 California cheese plants. The 9 plants processed 756.4 million pounds of cheese during the study period, representing 98.4% of the Cheddar and Monterey Jack cheese processed in California.
2. The processing costs summarized in this study were incurred during a 12-month period, starting in January 2002 and concluding in December 2002.
3. The "Processing Non-Labor" category includes costs such as utilities, repairs and maintenance, supplies, depreciation and rent.
4. The volume total includes both Cheddar and Monterey Jack cheeses, but the costs reflect only costs for 40 lb. blocks of Cheddar.
5. Three plants processed 500-lb. barrels or 640-lb. blocks. Packaging costs and packaging labor for 40 lb. blocks were substituted for these plants.
6. To obtain the weighted average, individual plant costs were weighted by their cheese processing volume relative to the total volume of cheese processed by all plants involved in the cost study.
7. The current manufacturing cost allowance for cheese is \$0.175 per pound. About 81% of the cheese was processed at a cost less than the manufacturing cost allowance.
8. The weighted average yield was 10.85 lbs. of cheese per hundredweight of milk. The weighted average moisture was 37.08%, and weighted average vat tests were 3.95% fat and 8.95% SNF.

<u>Cost Groups</u>	<u>Number of Plants</u>	<u>Processing Labor</u>	<u>Processing Non-Labor</u>	<u>Package</u>	<u>Other Ingredient</u>	<u>General & Administrative</u>	<u>Return on Investment</u>	<u>Total Cost</u>	<u>Volume in Group</u>	<u>Percent in Group</u>
<i>dollars per pound of cheese</i>										
Low Cost	3	\$0.0370	\$0.0679	\$0.0170	\$0.0114	\$0.0126	\$0.0072	\$0.1531	446,321,465	59.0%
Medium Cost	3	\$0.0485	\$0.0685	\$0.0191	\$0.0101	\$0.0161	\$0.0050	\$0.1673	241,126,317	31.9%
High Cost	3	\$0.0872	\$0.0709	\$0.0261	\$0.0110	\$0.0138	\$0.0049	\$0.2139	68,933,683	9.1%
<u>Summary Statistics</u>										
Weighted Average		\$0.0452	\$0.0684	\$0.0185	\$0.0110	\$0.0138	\$0.0063	\$0.1632		
Range {	Minimum	\$0.0360	\$0.0436	\$0.0140	\$0.0068	\$0.0094	\$0.0027			
	Maximum	\$0.0917	\$0.0988	\$0.0273	\$0.0251	\$0.0227	\$0.0096			
Total									756,381,465	100%

DEPARTMENT OF FOOD AND AGRICULTURE

A.G. KAWAMURA, Secretary

Dairy Marketing Branch
1220 N Street
Sacramento, CA 95814
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dairy@cdfa.ca.gov



November 23, 2004

TO ALL INTERESTED PARTIES:

Enclosed are copies of the latest nonfat powder, bulk butter and Cheddar cheese processing costs for the period of January through December 2003. The processing cost data does not include the cost of raw product nor does it include any cost of marketing finished product.

For each of the three manufactured products, the cost data are presented in a table that shows actual weighted-average cost of plants grouped by efficiency. Also enclosed is a summary table showing the weighted-average manufacturing cost for nonfat powder, butter and Cheddar cheese as published since May 1989. Cost includes packaging, processing labor, processing non-labor, general and administrative cost, return on investment and, for butter and Cheddar cheese, miscellaneous ingredients.

Should you have any questions regarding this material, please contact Tom Gossard or me at the telephone number or e-mail address above.

Sincerely,

Original signed by:

Edward Hunter
Supervising Auditor I

Enclosures

GGG

**Weighted Average Manufacturing Costs
for Butter, Nonfat Powder and Cheddar Cheese
1989 - 2004**

Costs include processing labor, non-labor processing, packaging, other ingredients (for butter and Cheddar cheese only), general and administrative and return on investments.

<u>Date of Release</u>		<u>Butter</u>		<u>Nonfat Powder</u>		<u>Cheddar Cheese¹</u>	
<u>Year</u>	<u>Month</u>	<u>Cost per Pound</u>	<u>Number of Plants</u>	<u>Cost per Pound</u>	<u>Number of Plants</u>	<u>Cost per Pound</u>	<u>Number of Plants</u>
1989	May	\$0.0879	11	\$0.1370	11	\$0.2251	9
1992	July	\$0.0969	12	\$0.1443	12	\$0.2010	9
1995	November	\$0.0928	9	\$0.1328	9	\$0.1981	8
1996	December	\$0.0970	9	\$0.1333	9	\$0.1898	8
1997	July	\$0.0958	8	\$0.1327	9	\$0.1840	9
1999	February	\$0.0930	8	\$0.1277	9	\$0.1759	10
2000	February	\$0.0957	8	\$0.1356	10	\$0.1693	9
2001	October ²	\$0.1001	8	\$0.1590	11	\$0.1802	9
2002	November ³	\$0.1208	7	\$0.1619	11	\$0.1775	9
2002	December ⁴	\$0.1211	7	\$0.1512	11	\$0.1746	9
2003	November ⁵	\$0.1235	7	\$0.1464	10	\$0.1632	9
2004	November ⁶	\$0.1299	7	\$0.1560	10	\$0.1706	9

¹ For the 1996 Cheddar cheese cost study and subsequent cost studies, we have included costs associated with Cheddar cheese plants producing 500 pound barrels and 640 pound blocks. However, costs for packaging labor and packaging expenses were replaced with the average of those costs associated with 40 pound block plants.

² Includes the cost studies completed for periods between January 1998 and December 1999 and adjusted for utility costs. The utility cost adjustments were made using each plant's invoices for energy costs for August 2001.

³ Includes the unadjusted cost studies for periods between July 2000 and December 2001.

⁴ Includes the cost studies for periods between July 2000 and December 2001 and adjusted for August 2002 utility invoices as well as 2002 data updating wages, payroll taxes and fringe benefits for all plants.

⁵ Includes the unadjusted cost studies for periods between January and December 2002.

⁶ Includes the unadjusted cost studies for periods between January and December 2003.

Butter Processing Costs

Released November 2004

1. Manufacturing cost data were collected and summarized from 7 California butter plants. The 7 plants processed 362.4 million pounds of butter during the study period, representing 99.8% of the butter processed in California.
2. The processing costs summarized in this study were incurred during a 12-month period, starting in January 2003 and concluding in December 2003.
3. The "Processing Non-Labor" category includes costs such as utilities, repairs and maintenance, supplies, depreciation and rent.
4. The volume total includes both bulk butter and cut butter, but the costs reflect only costs for bulk butter (25 kg and 68 lb. blocks).
5. To obtain the weighted average, individual plant costs were weighted by their butter processing volume relative to the total volume of butter processed by all plants involved in the cost study.
6. The current manufacturing cost allowance for butter is \$0.132 per pound. About 59% of the butter was processed at a cost less than the manufacturing cost allowance.

<u>Cost Groups</u>	<u>Number of Plants</u>	<u>Processing Labor</u>	<u>Processing Non-Labor</u>	<u>Package</u>	<u>Other Ingredient</u>	<u>General & Administrative</u>	<u>Return on Investment</u>	<u>Total Cost</u>	<u>Volume in Group</u>	<u>Percent in Group</u>
<i>dollars per pound of butter</i>										
Low Cost	3	\$0.0400	\$0.0406	\$0.0090	\$0.0025	\$0.0115	\$0.0029	\$0.1065	215,142,837	59.4%
High Cost	4	\$0.0582	\$0.0668	\$0.0089	\$0.0064	\$0.0177	\$0.0062	\$0.1642	147,243,710	40.6%
<u>Summary Statistics</u>										
Weighted Average		\$0.0474	\$0.0512	\$0.0090	\$0.0041	\$0.0140	\$0.0042	\$0.1299		
Range {	Minimum	\$0.0345	\$0.0366	\$0.0062	\$0.0015	\$0.0065	\$0.0025			
	Maximum	\$0.1583	\$0.1031	\$0.0105	\$0.0089	\$0.0606	\$0.0067			
Total									362,386,547	100%

Nonfat Powder Processing Costs

Released November 2004

1. Manufacturing cost data were collected and summarized from 10 California nonfat powder plants. The 10 plants processed 739 million pounds of nonfat powder during the study period, representing 100% of the nonfat powder processed in California.
2. The processing costs summarized in this study were incurred during a 12-month period, starting in January 2003 and concluding in December 2003.
3. The "Processing Non-Labor" category includes costs such as utilities, repairs and maintenance, supplies, depreciation and rent.
4. The volume total includes all grades of nonfat powder packaged in any container size, but the costs reflect only costs for 25 kg and 50 lb. bags of nonfat powder.
5. To obtain the weighted average, individual plant costs were weighted by their nonfat powder processing volume relative to the total volume of nonfat powder processed by all plants involved in the cost study.
6. The current manufacturing cost allowance for nonfat powder is \$0.15 per pound. About 63% of the nonfat powder was processed at a cost less than the manufacturing cost allowance.

<u>Cost Groups</u>	<u>Number of Plants</u>	<u>Processing Labor</u>	<u>Processing Non-Labor</u>	<u>Package</u>	<u>General & Administrative</u>	<u>Return on Investment</u>	<u>Total Cost</u>	<u>Volume in Group</u>	<u>Percent in Group</u>
<i>dollars per pound of powder</i>									
Low Cost	3	\$0.0328	\$0.0816	\$0.0145	\$0.0094	\$0.0047	\$0.1430	465,947,584	63.1%
Medium Cost	4	\$0.0364	\$0.0980	\$0.0144	\$0.0125	\$0.0076	\$0.1689	239,070,247	32.4%
High Cost	3	\$0.0699	\$0.1316	\$0.0122	\$0.0195	\$0.0085	\$0.2417	33,972,103	4.6%
<u>Summary Statistics</u>									
Weighted Average		\$0.0357	\$0.0892	\$0.0144	\$0.0109	\$0.0058	\$0.1560		
Range {	Minimum	\$0.0279	\$0.0752	\$0.0106	\$0.0068	\$0.0028			
	Maximum	\$0.0963	\$0.2050	\$0.0148	\$0.0351	\$0.0098			
Total								738,989,934	100%

Cheese Processing Costs

Released November 2004

1. Manufacturing cost data were collected and summarized from 9 California cheese plants. The 9 plants processed 756.6 million pounds of cheese during the study period, representing 99.6% of the Cheddar and Monterey Jack cheese processed in California.
2. The processing costs summarized in this study were incurred during a 12-month period, starting in January 2003 and concluding in December 2003.
3. The "Processing Non-Labor" category includes costs such as utilities, repairs and maintenance, supplies, depreciation and rent.
4. The volume total includes both Cheddar and Monterey Jack cheeses, but the costs reflect only costs for 40 lb. blocks of Cheddar.
5. Three plants processed 500-lb. barrels or 640-lb. blocks. Packaging costs and packaging labor for 40 lb. blocks were substituted for these plants.
6. To obtain the weighted average, individual plant costs were weighted by their cheese processing volume relative to the total volume of cheese processed by all plants involved in the cost study.
7. The current manufacturing cost allowance for cheese is \$0.175 per pound. About 79% of the cheese was processed at a cost less than the manufacturing cost allowance.
8. The weighted average yield was 10.92 lbs. of cheese per hundredweight of milk. The weighted average moisture was 37.12%, and weighted average vat tests were 3.94% fat and 8.95% SNF.

<u>Cost Groups</u>	<u>Number of Plants</u>	<u>Processing Labor</u>	<u>Processing Non-Labor</u>	<u>Package</u>	<u>Other Ingredient</u>	<u>General & Administrative</u>	<u>Return on Investment</u>	<u>Total Cost</u>	<u>Volume in Group</u>	<u>Percent in Group</u>
<i>dollars per pound of cheese</i>										
Low Cost	3	\$0.0415	\$0.0730	\$0.0176	\$0.0106	\$0.0129	\$0.0058	\$0.1614	458,904,543	60.7%
Medium Cost	3	\$0.0526	\$0.0695	\$0.0203	\$0.0112	\$0.0170	\$0.0038	\$0.1744	236,205,739	31.2%
High Cost	3	\$0.0951	\$0.0793	\$0.0237	\$0.0101	\$0.0128	\$0.0046	\$0.2256	61,454,679	8.1%
<u>Summary Statistics</u>										
Weighted Average		\$0.0493	\$0.0724	\$0.0189	\$0.0107	\$0.0142	\$0.0051	\$0.1706		
Range {	Minimum	\$0.0377	\$0.0524	\$0.0141	\$0.0066	\$0.0076	\$0.0022			
	Maximum	\$0.1313	\$0.1269	\$0.0267	\$0.0224	\$0.0215	\$0.0079			
Total									756,564,961	100%

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Manufacturing Cost Annual

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*This publication would not be possible without the cooperation of the
individuals and firms engaged in the production, manufacture, and
distribution of milk and dairy products.*

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We welcome your comments on this Manufacturing Cost Annual.

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Introduction

The California Food and Agricultural Code specifies that the Department of Food and Agriculture (Department) must consider manufacturing costs in determining appropriate minimum prices for products categorized as Class 4a (butter, whey and dried milk products) and Class 4b (cheese). Notwithstanding the legislative decree, the Department has a more direct need for the cost studies in light of the end product pricing formulas used to establish milk prices. The studies have been used frequently to establish reasonable manufacturing cost (make) allowances through the public hearing process.

The Department maintains a Manufacturing Cost Unit that collects and summarizes cost data from California dairy manufacturing plants. Any plant that produces Class 4a or Class 4b products may be asked to participate in the cost studies. The study is very nearly a census of California's butter, nonfat dry milk (NFDM), skim whey powder and Cheddar cheese plants. Butter, NFDM, skim whey powder, and Cheddar cheese study participants typically account for over 97 percent of respective products manufactured in California. Data on cream and condensed skim were collected concurrently from plants that participated in the butter, NFDM, skim whey powder, and Cheddar cheese studies. As a result, data on cream and condensed skim accounted for significantly less volume. Plants that manufacture cream and condensed skim but do not manufacture butter, NFDM, skim whey powder or Cheddar cheese were not included in the study.

The data from the cost studies have a practical significance beyond the boundaries of California. They are the only studies in the U.S. which present detailed audits of processing cost of butter, NFDM, skim whey powder, and Cheddar cheese plants over a period of several years. The studies are conducted by professional auditors specializing in dairy accounting practices. The auditors review plant records on site and work with plant management to collect data on all aspects of the operation. The auditors also determine allocations of plant expenditures for each product manufactured by the plant. For the plants in the study, the results can help to isolate the actual costs of manufacturing and give benchmark figures obtained from other California manufacturing plants. Consequently, although the Department has the legal authority to collect cost information from the various types of milk processing plants, most plants find the study and resulting comparisons valuable and cooperate in the cost studies voluntarily.

Highlights of the Manufacturing Cost Studies

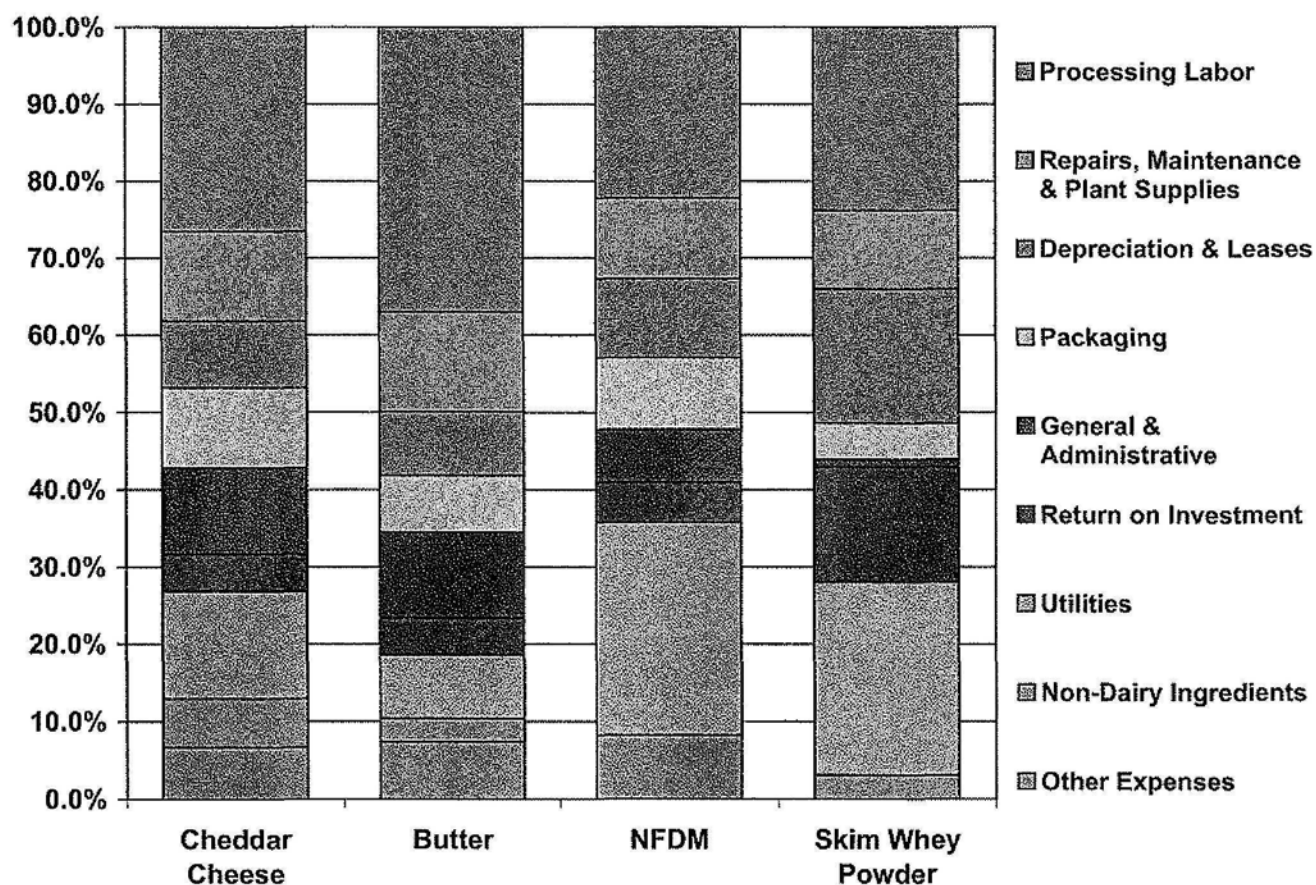
Each plant in the study gave access to cost data for a 12-month period during the study period January 2004 to December 2004. The 2004 cost studies included 8 butter plants, 10 NFDM plants, 3 skim whey powder plants, 7 Cheddar cheese plants, 9 condensed skim plants and 9 cream plants. For these cost studies, the butter plants accounted for 99.9 percent of the butter produced in California. Similarly, the NFDM plants accounted for 99.2 percent of the NFDM produced in California, 79 percent of the skim whey powder produced in California, and Cheddar cheese plants accounted for 98.5 percent of the Cheddar and Monterey Jack cheese produced in California. Since about half the plants process and sell bulk cream and /or condensed skim, data was also accumulated for these products.

Labor Was the Largest Cost Component

The predominant category contributing to overall processing costs for any of the four types of studies was labor (Figure 1). Labor contributed an average of 37 percent to total butter processing costs, 22 percent of NFDM processing costs, 27 percent of Cheddar cheese processing costs and 24 percent of skim whey powder processing cost. The dollar impact of other cost categories varied by product type. Utility costs accounted for 28 percent of NFDM processing costs, 8 percent of butter processing costs, 14 percent of Cheddar cheese processing costs and 25 percent of skim whey powder processing costs. Depreciation and lease expenses also showed variability among plant types – 9 percent for Cheddar cheese plants, 8 percent for butter plants, 10 percent for NFDM plants, and 17 percent for skim whey powder plants. The difference in cost structures appears to be attributable, in part, to differences in type of plant ownership. The majority of the butter, NFDM and skim whey powder plants (but only about half of the Cheddar cheese plants) are operated by farmer-owned cooperatives.

This publication is divided into sections by product, e.g., Cheddar cheese, Butter, NFDM and skim whey powder. Each section includes a summary table which describes categorized processing costs. Bar charts identify the distribution of costs among the study plants. Pie charts detail the overall contribution of individual cost categories to the overall cost structure. This issue of the Manufacturing Cost Annual also contains some general information on the cream and condensed skim milk.

Figure 1. Comparison of Costs by Category for California Manufacturing Plants



Cheese Study

Cost studies were completed on seven cheese plants for 2004. Each was assigned to one of two groups based on the plant's total processing cost. While costs were calculated based on 40 lb. blocks of Cheddar cheese only, the plants typically manufactured other cheese products and a variety of by-products (Figure 2). Cost summary statistics based on the plants in the study provide a quantitative profile of California Cheddar cheese plants, including production capacity, per pound processing costs and cheese vat information (Tables 1 and 2).

- The data indicated that the lower cost Cheddar plants in the state tended to be the larger plants. Specifically, the three low cost plants produced 77 percent of the Cheddar and Jack cheese in 2004.
- Among the two cost groupings, labor cost was the single largest category that determined manufacturing cost. Processing labor ranged from 4.0¢ per pound in the low cost group to 7.1¢ per pound in the high cost group, a 78 percent difference.
- Processing non-labor costs as a group were larger than labor costs but included several different plant expenses, such as utilities, depreciation, repairs and maintenance, laundry, supplies and plant insurance. In the high cost group, these costs averaged 5.8¢ per pound; in the low cost group, these costs averaged 7.6¢ per pound.
- The return on investment (ROI) allowance is calculated by subtracting accumulated depreciation from the original cost of the assets. The remaining book value is multiplied by the Moody's "BAA" corporate bond index. Those amounts are then allocated to the products in the plant based on the same methods used to allocate the depreciation expense.
- The ROI allowance is an opportunity cost and represents how much interest the company could have earned if its capital was not tied up in land, buildings and equipment. In other words, it is viewed as an alternative source of income had the company invested the capital elsewhere. A higher ROI cost suggests that a plant is relatively new with little accumulated depreciation of its assets (high book value) or that an established plant has low production volume such that the ROI cost has a larger impact than plants with more production volume, all other factors being equal.
- Packaging costs showed little variation comparing the high cost group (2.1¢ per pound) with the low cost group (1.8¢ per pound).
- Only small differences among cheese making parameters were evident when using the two cost groups (Table 2).

Table 1. Processing Costs for Seven California Cheddar Cheese Plants

1. Manufacturing cost data were collected and summarized from seven California cheese plants. The seven plants processed 817 million pounds of cheese during the study period, representing 98.5% of the Cheddar and Monterey Jack cheese processed in California.
2. The processing costs summarized in this study were incurred during a 12-month period, starting in January 2004 and concluding in December 2004.
3. The "Processing Non-Labor" category includes costs such as utilities, repairs and maintenance, supplies, depreciation and rent.
4. The volume total includes both Cheddar and Monterey Jack cheeses, but the costs reflect only costs for 40 lb. blocks of Cheddar.
5. Three plants processed 500-lb. barrels or 640-lb. blocks. Packaging costs and packaging labor for 40 lb. blocks were substituted for these plants.
6. To obtain the weighted average, individual plant costs were weighted by their cheese processing volume relative to the total volume of cheese processed by all plants involved in the cost study.
7. The current manufacturing cost allowance for cheese is \$0.171 per pound. About 62% of the cheese was processed at a cost less than the manufacturing cost allowance.
8. The weighted average yield was 11.53 lbs. of cheese per hundredweight of milk. The weighted average moisture was 37.04%, and weighted average vat tests were 4.02% fat and 9.05% SNF.

Cost Groups	Number of Plants	Processing Labor	Processing Non-Labor	Package	Other Ingredient	General & Administrative	Return on Investment	Total Cost	Volume in Group
<i>dollars per pound of cheese</i>									
Low Cost	3	\$0.0397	\$0.0759	\$0.0180	\$0.0089	\$0.0191	\$0.0094	\$0.1710	628,560,303
High Cost	4	\$0.0709	\$0.0584	\$0.0206	\$0.0179	\$0.0243	\$0.0042	\$0.1963	188,508,025
<i>Summary Statistics</i>									
Weighted Average		\$0.0469	\$0.0719	\$0.0186	\$0.0110	\$0.0203	\$0.0082	\$0.1769	
Range {	Minimum	\$0.0340	\$0.0518	\$0.0146	\$0.0066	\$0.0077	\$0.0024		
	Maximum	\$0.0852	\$0.0795	\$0.0281	\$0.0289	\$0.0299	\$0.0128		
Total									817,068,328

Table 2. Cheddar Cheese Production Parameters from Cost Studies¹

Cost Group	Finished Moisture %	Vat Fat Test %	Vat SNF Test %	Vat Yield (Lbs.)
Low	37.03%	4.01%	9.00%	11.58%
High	36.89%	3.94%	9.18%	10.95%
Wt'd Avg.	37.04%	4.02%	9.05%	11.53%

¹ Moisture, vat tests and yields reflect levels achieved for Cheddar cheese only.

Characteristics of Cheddar Cheese Plants

While the summary analyses of the cost studies that have been published historically have provided many insights into Cheddar cheese operations in California, they do not address some of the most basic features of the plants and how different costs compare among the plants in the study. In the following section, summary statistics are provided to indicate how much variation exists among cheese plants. The "weighted average" is weighted by pounds of cheese produced. The "median" is the midpoint in the data and indicates the point at which half of the plants are above and half of the plants are below the given figure.

Throughout this section, column charts are used to show the distribution of the plants within a specified category or the breakdown of costs by category. The charts give an indication of how much variation exists among the plants and the relative impact of individual cost categories.

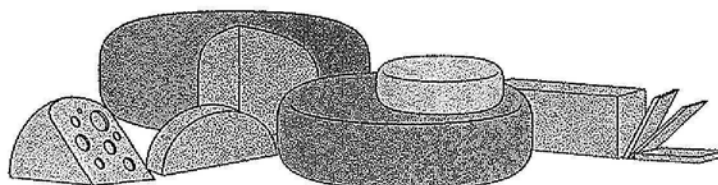


Figure 2. Simplified Product Flow in a Cheese Plant with By-Product Processing

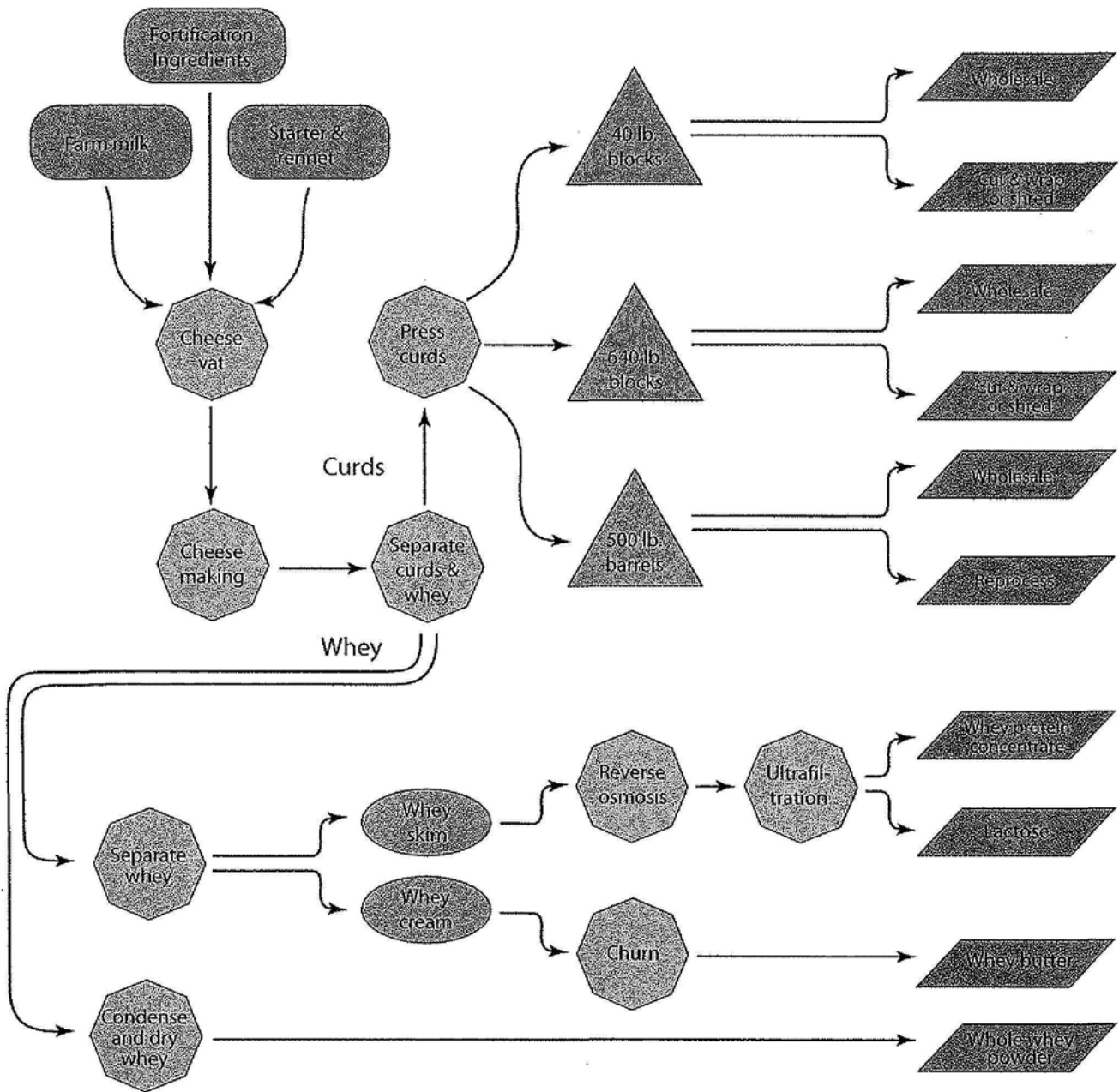


Figure 3. Breakdown of Cheddar Cheese Processing Costs

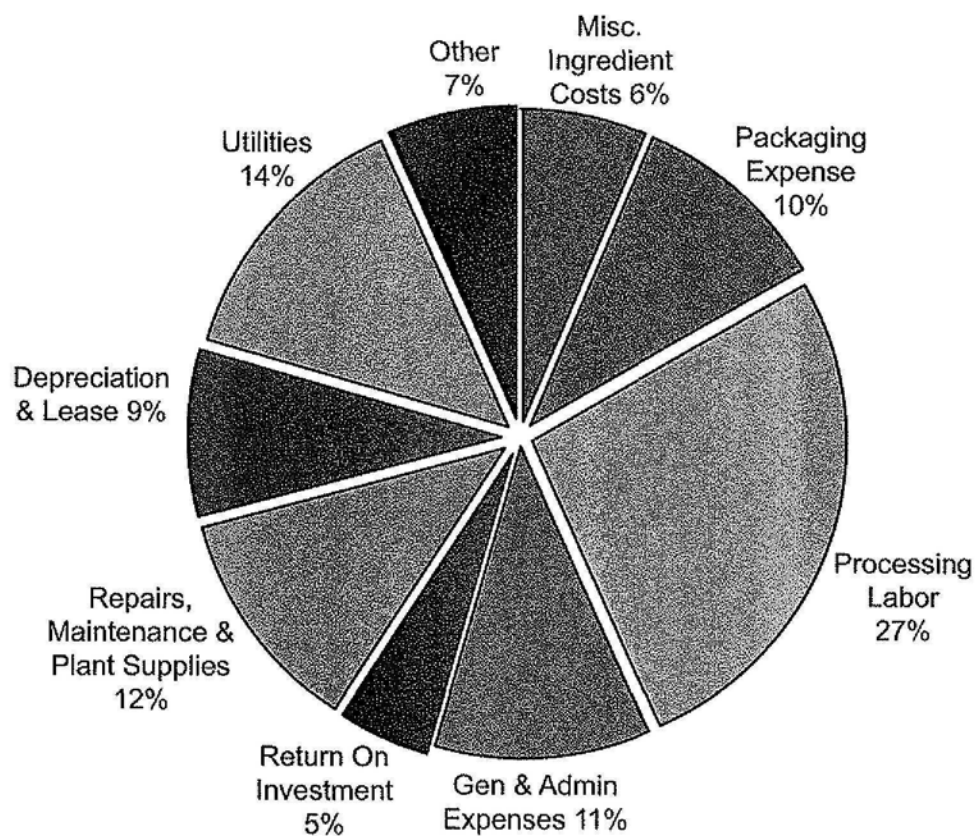


Figure 4. Breakdown of Cheddar Cheese Packaging Sizes

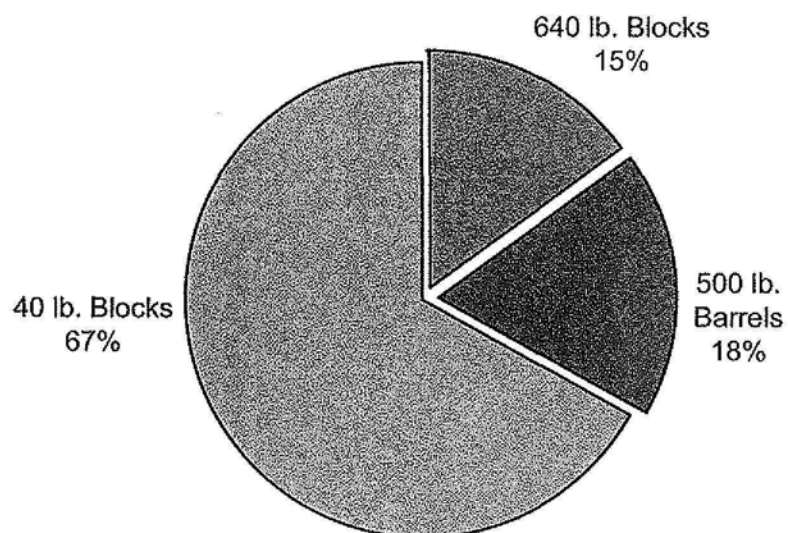
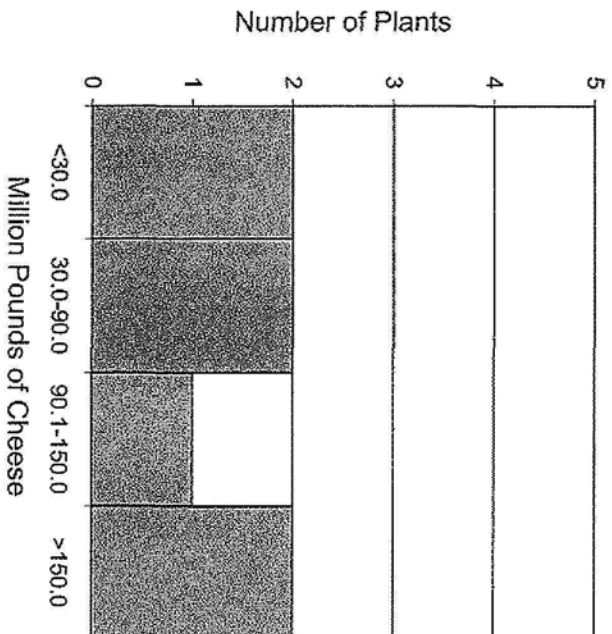


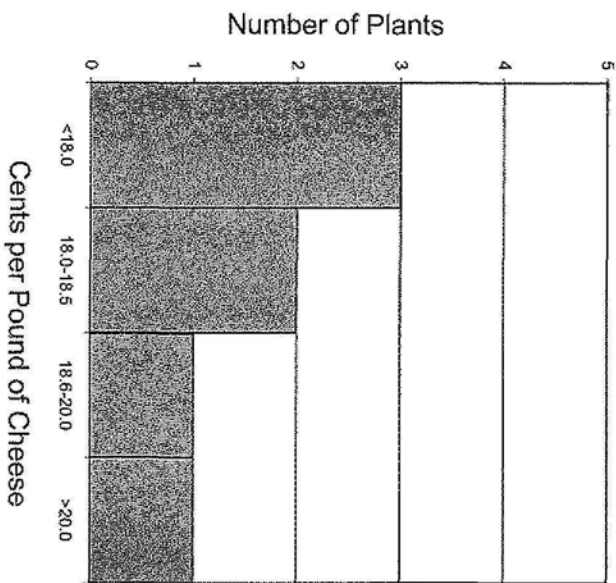
Figure 5. Annual California Cheddar and Jack Cheese Production



Average = 117 million pounds
 Median = 88 million pounds
 Average of low 3 = 33 million pounds
 Average of high 4 = 179 million pounds

- Two plants produced over 180 million pounds.
- Three of the seven plants produced less than 50 million pounds.

Figure 6. Manufacturing Cost per Pound



Average = 18.3¢ per pound
 Wtd Average = 17.6¢ per pound
 Median = 17.7¢ per pound
 Average of low 3 = 17.1¢ per pound
 Average of high 4 = 19.6¢ per pound

- In general, larger plants had lower costs per pound than smaller plants.
- Cost per pound ranged from 17¢ per pound to greater than 20¢ per pound.
- Three plants had costs per pound of less than 18¢.

Figure 7. Share of California Cheddar and Jack Cheese Production by Ownership Type and by Workforce Type

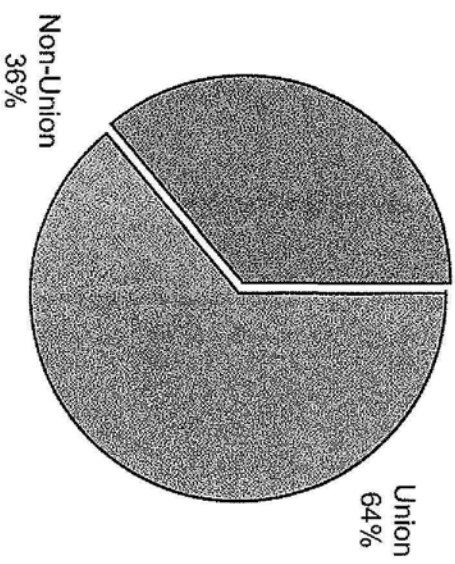
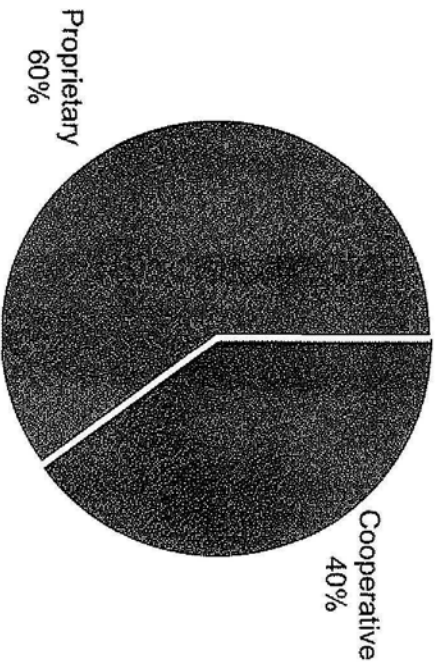
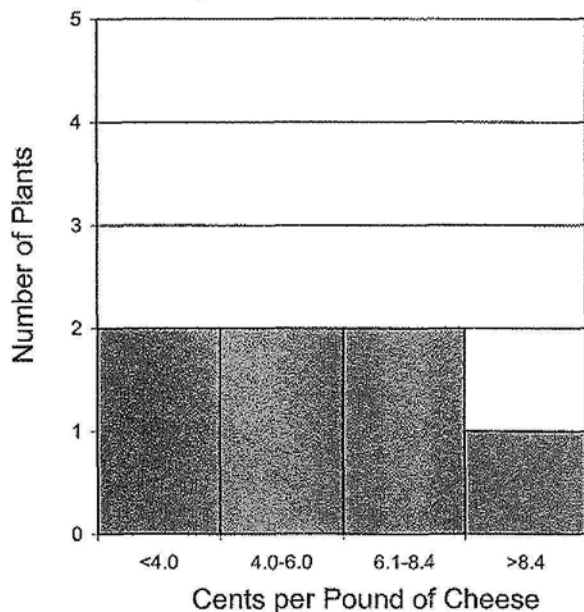


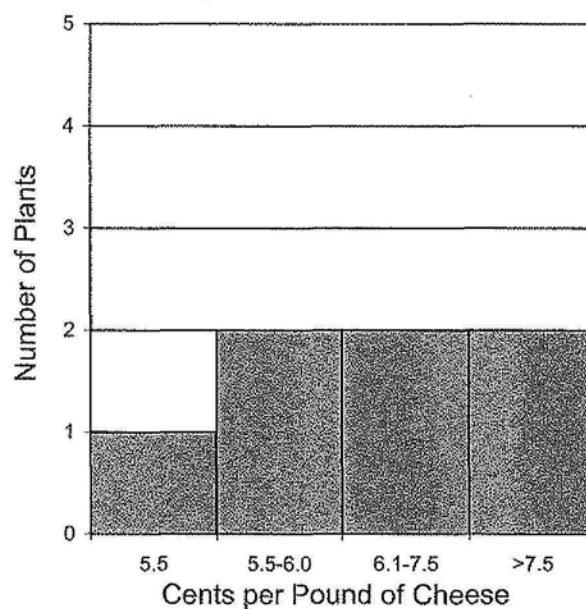
Figure 8. Processing Labor Cost per Pound



Average	=	5.6¢ per pound
Wt'd Average	=	4.7¢ per pound
Median	=	5.1¢ per pound
Average of low 3	=	4.0¢ per pound
Average of high 4	=	7.1¢ per pound

- Three plants had labor costs ranging from 3¢ to 5¢ per pound.
- The average labor cost per pound for the high 4 plants was 78% higher than the average labor cost for the low 3 plants.
- Simple average labor cost was 5.6¢ whereas the weighted average cost based on production volume was 4.7¢ indicating a lower cost, generally, for larger plants.

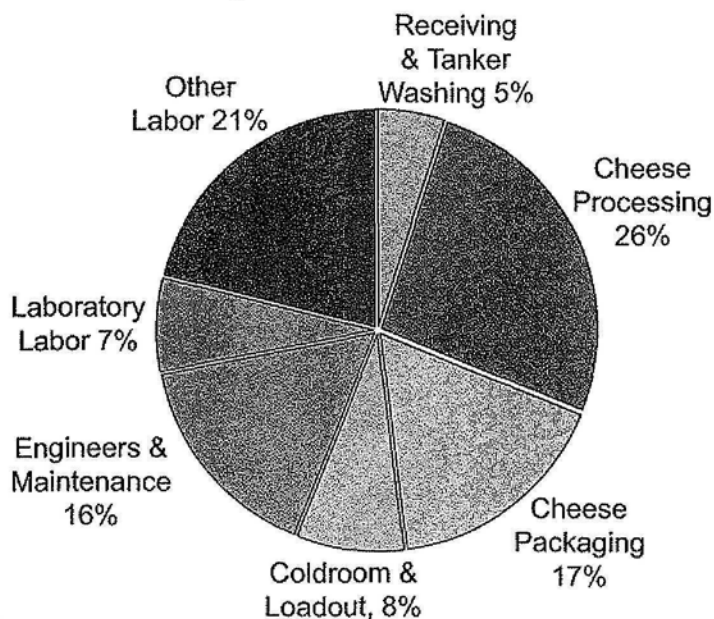
Figure 9. Processing Non-Labor Cost per Pound



Average	=	6.7¢ per pound
Wt'd Average	=	7.2¢ per pound
Median	=	6.7¢ per pound
Average of low 3	=	7.6¢ per pound
Average of high 4	=	5.8¢ per pound

- Includes utilities, depreciation, repairs and maintenance, laundry, supplies, and plant insurance.
- Three plants had non-labor costs of less than 6¢; two plants had non-labor costs in the 6¢ to 7¢ range; and the remaining two plants ranged from 7¢ to 8¢ per pound.

Figure 10. Cheddar Cheese Labor Breakdown by Category

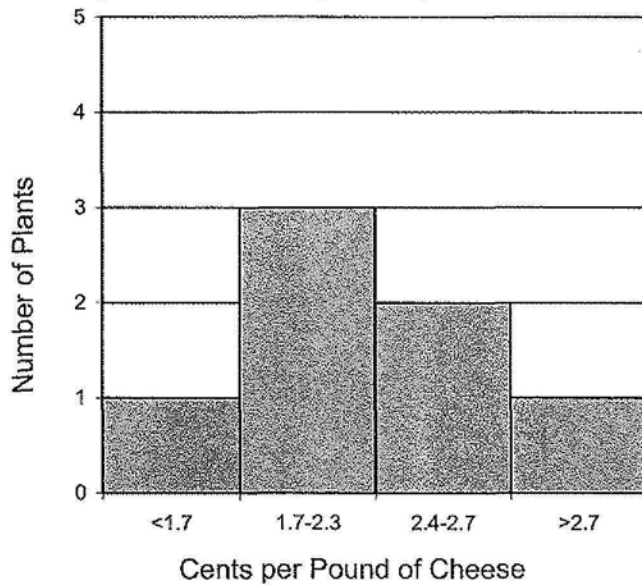


Based on detailed data:

Labor cost averaged 5.6¢ per pound
Labor cost averaged \$2.22 per 40 lb. block

Note: "Other" includes pasteurizing, separating, plant manager/superintendent, general plant, plant clerical, and whey disposal.

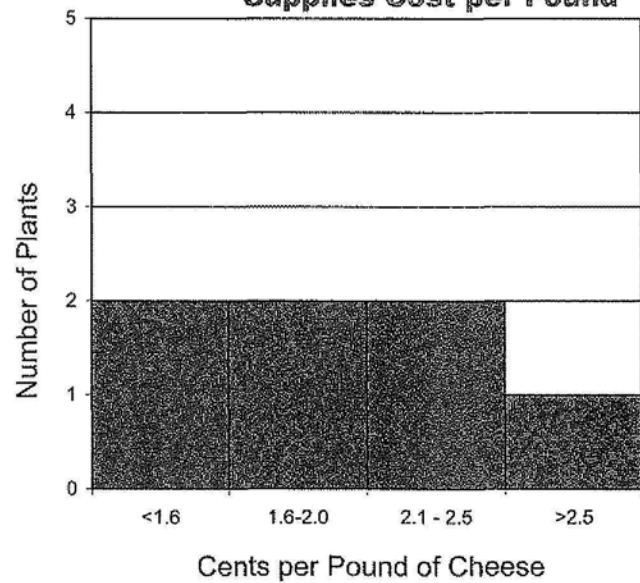
Figure 11. Utility Cost per Pound



Average	=	2.3¢ per pound
Wt'd Average	=	2.5¢ per pound
Median	=	2.3¢ per pound
Average of low 3	=	2.0¢ per pound
Average of high 4	=	2.6¢ per pound

- Utility costs ranged from 1.5¢ to 2.8¢ per pound.
- The average utility cost per pound for the high 4 plants was 30% more than that of the average utility cost for the low 3 plants.
- Electricity represents 37% of the utility cost while natural gas represented approximately 33%. Sewage, water, and whey disposal make up 30% of the total cost.

Figure 12. Repairs, Maintenance, and Supplies Cost per Pound



Average	=	2.0¢ per pound
Wt'd Average	=	2.1¢ per pound
Median	=	2.0¢ per pound
Average of low 3	=	1.6¢ per pound
Average of high 4	=	2.3¢ per pound

- Repairs and maintenance represent approximately 63% of the costs incurred in this category; and supplies represent 38%.
- Older plants tended to have higher per pound repair and maintenance costs.
- Repair and maintenance cost per pound of cheese ranged from 1.4¢ to 2.6¢ per pound. The weighted average repair and maintenance cost per pound of cheese was 2.1¢.

Figure 13: Comparison of Payroll Breakdown for Plant Employees, Hourly and Salaried

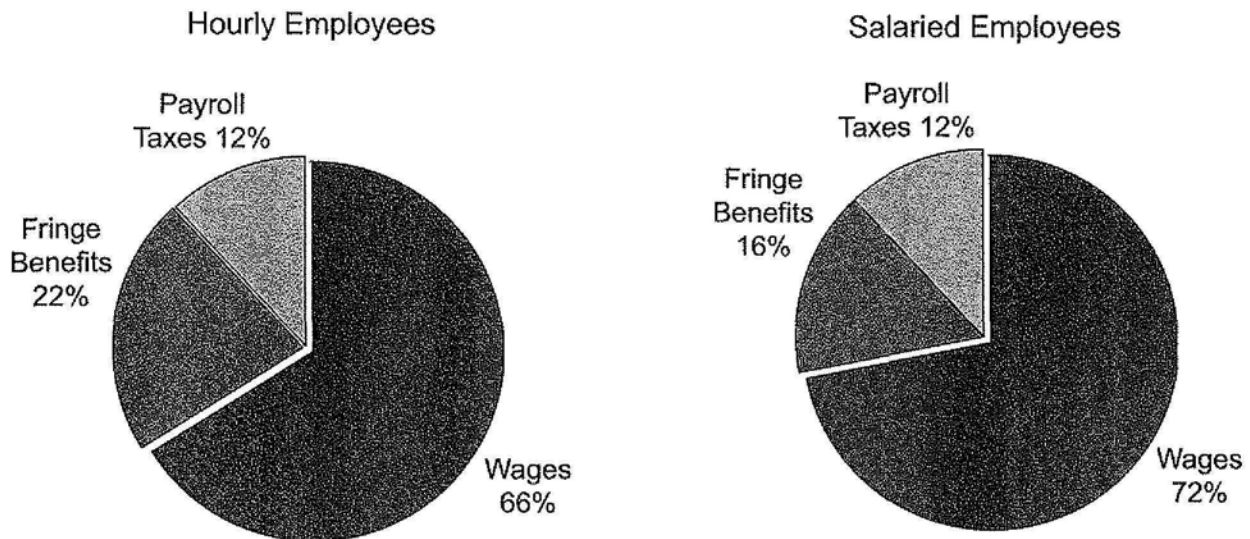
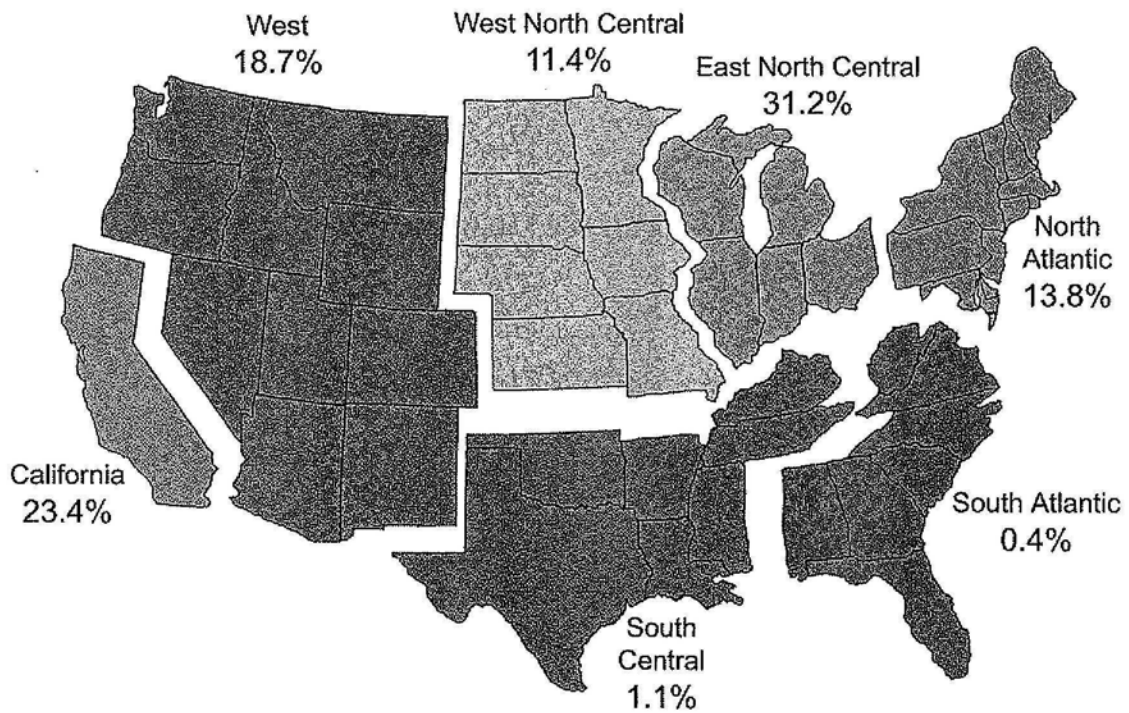


Figure 14. Share of Cheese Production by Region, 2005



Butter Study

Cost studies were completed on eight butter plants for 2004. Plant cost summary statistics based on the study plants give an indication of plant size and per pound processing costs for various categories (Table 3). To avoid revealing plant-specific information, the eight plants were assigned to one of two groups according to total processing cost. Only costs for bulk butter (25kg and 68 lb. boxes) were analyzed although most plants produced a variety of other sizes (Figures 17).

- The data indicated that the lower cost butter plants in the state tended to be plants with larger production volumes. Specifically, the four low cost plants produced 75 percent of the butter in California during 2004.
- Between the two cost groupings, labor cost was the single largest item that determined manufacturing cost. Processing labor ranged from a weighted average of 4.5¢ per pound in the low cost group to an average of 6.9¢ per pound in the high cost group, a 53 percent increase.
- Processing non-labor cost as a group was slightly less than labor cost but included several different plant expenses, such as utilities, depreciation, repairs and maintenance, laundry, supplies and plant insurance. These costs ranged from 4.6¢ per pound to 6.5¢ per pound, a 41 percent difference.
- The return on investment (ROI) allowance is calculated by subtracting accumulated depreciation from the original cost of assets. The remaining book value is multiplied by the Moody's "BAA" corporate bond index. Those amounts are then allocated to the products in the plant based on the same methods used to allocate the depreciation expense. ROI costs were 11.5% higher for the low cost plants.
- Packaging costs showed little variation among the two cost groups, but general and administrative costs were 119 percent higher for the high cost group.

Table 3. Processing Costs for Eight California Butter Plants

1. Manufacturing cost data were collected and summarized from eight California butter plants. The eight plants processed 382.9 million pounds of butter during the study period, representing 99.9% of the butter processed in California.
2. The processing costs summarized in this study were incurred during a 12-month period, starting in January 2004 and concluding in December 2004.
3. The "Processing Non-Labor" category includes costs such as utilities, repairs and maintenance, supplies, depreciation and rent.
4. The volume total includes both bulk butter and cut butter, but the costs reflect only costs for bulk butter (25 kg and 68 lb. blocks).
5. To obtain the weighted average, individual plant costs were weighted by their butter processing volume relative to the total volume of butter processed by all plants involved in the cost study.
6. The current manufacturing cost allowance for butter is \$0.156 per pound. About 75% of the butter was processed at a cost less than the manufacturing cost allowance.

Cost Groups	Number of Plants	Processing Labor	Processing Non-Labor	Package	Other Ingredient	General & Administrative	Return on Investment	Total Cost	Volume in Group
<i>dollars per pound of butter</i>									
Low Cost	4	\$0.0446	\$0.0456	\$0.0098	\$0.0045	\$0.0117	\$0.0068	\$0.1230	288,092,738
High Cost	4	\$0.0692	\$0.0652	\$0.0106	\$0.0026	\$0.0256	\$0.0061	\$0.1793	94,838,606
<i>Summary Statistics</i>									
Weighted Average		\$0.0507	\$0.0504	\$0.0100	\$0.0040	\$0.0151	\$0.0066	\$0.1368	
Range {	Minimum	\$0.0392	\$0.0336	\$0.0073	\$0.0016	\$0.0053	\$0.0038		
	Maximum	\$0.1826	\$0.1124	\$0.0141	\$0.0086	\$0.0914	\$0.0103		
Total									382,931,344



Characteristics of Butter Plants

While the summary analyses of the cost studies that have been published historically have provided many insights into butter processing plants in California, they do not address some of the most basic features of the plants and how different costs compare among the plants in the study. In the following section, summary statistics are provided to indicate how much variation exists among butter plants. The "weighted average" is based on pounds of butter produced. The "median" indicates the point at which half of the plants are above and half of the plants are below the given figure.

Throughout this section, column charts are used to show the distribution of plants within a specified category or the breakdown of costs by category. The graphs give an indication of how much variation exists among the plants and the relative impact of individual cost categories.

Figure 15. Simplified Flowchart of a Butter and Nonfat Dry Milk Plant

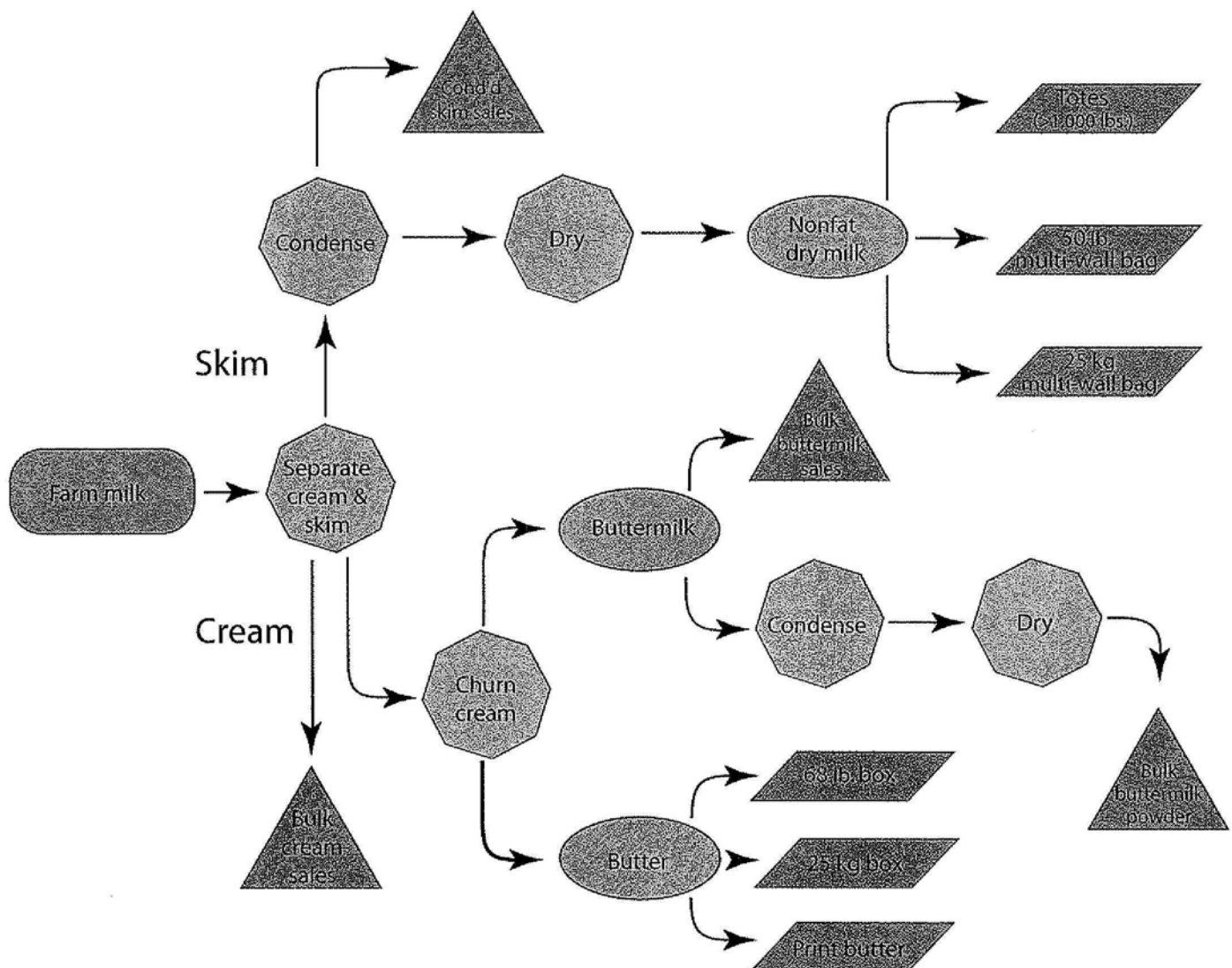


Figure 16. Breakdown of Butter Processing Costs

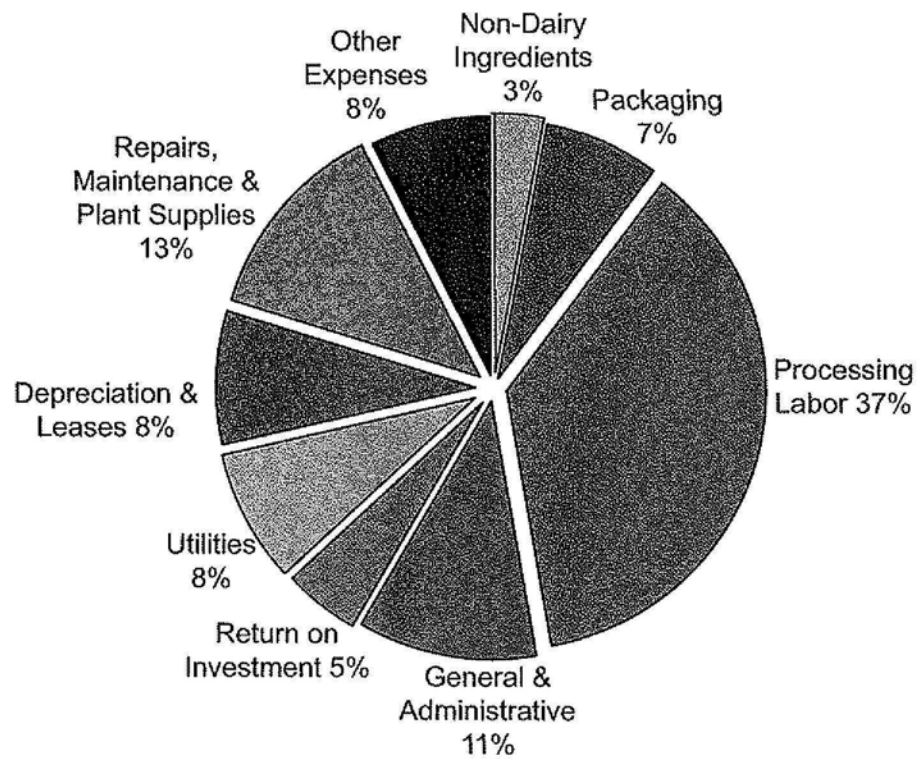


Figure 17. Breakdown of Butter Packaging Sizes and Types

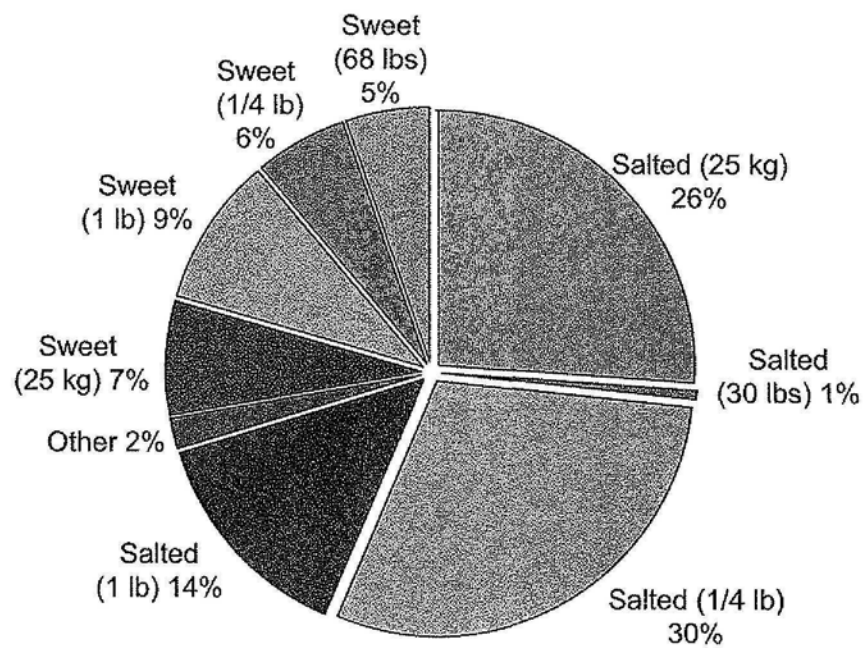
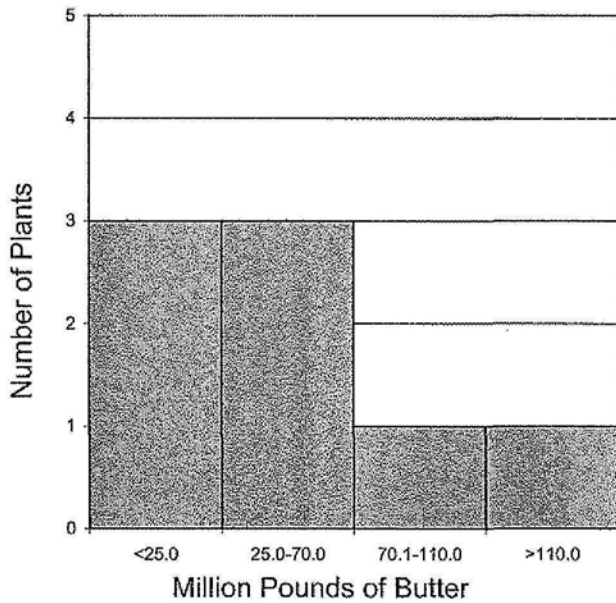


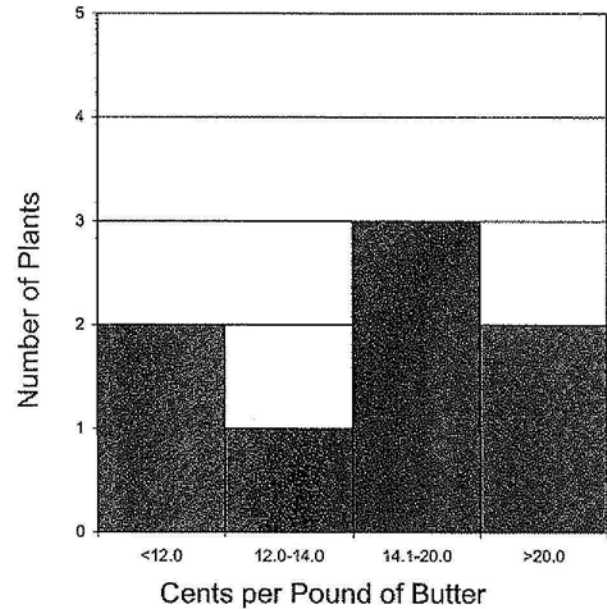
Figure 18. Annual California Butter Production



Average	=	48 million pounds
Median	=	31 million pounds
Average of low 4	=	16 million pounds
Average of high 4	=	79 million pounds

- Six plants produced less than 60 million pounds in 2004, while two plants produced more than 90 million pounds.
- * The 4 largest plants produced 5 times more butter than the 4 smallest plants.

Figure 19. Butter Manufacturing Cost per Pound



Average	=	17.8¢ per pound
Wt'd Average	=	13.7¢ per pound
Median	=	14.2¢ per pound
Average of low 4	=	12.3¢ per pound
Average of high 4	=	17.9¢ per pound

- Half of the plants produced butter for less than 15¢ per pound.
- In general, larger butter plants tended to have lower per unit butter production costs than smaller plants.
- Plants with higher total processing costs also had higher labor costs.
- The average cost per pound of the high cost plants was 46% higher than that of the low cost plants.

Figure 20. Share of California Butter Production by Ownership Type and by Workforce Type

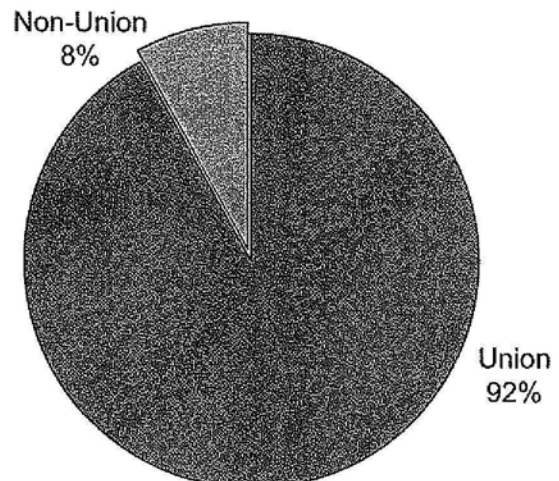
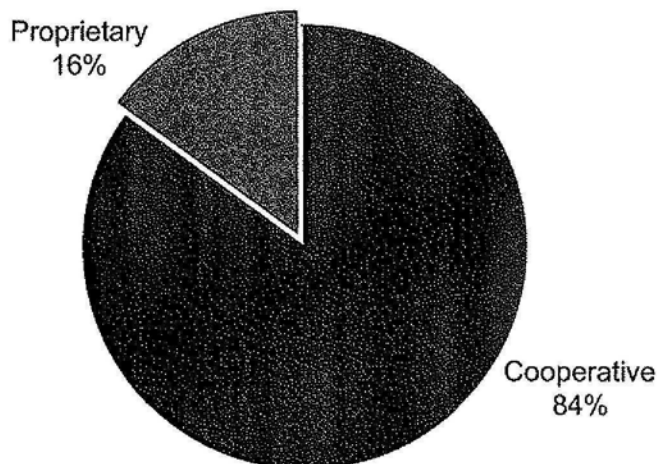
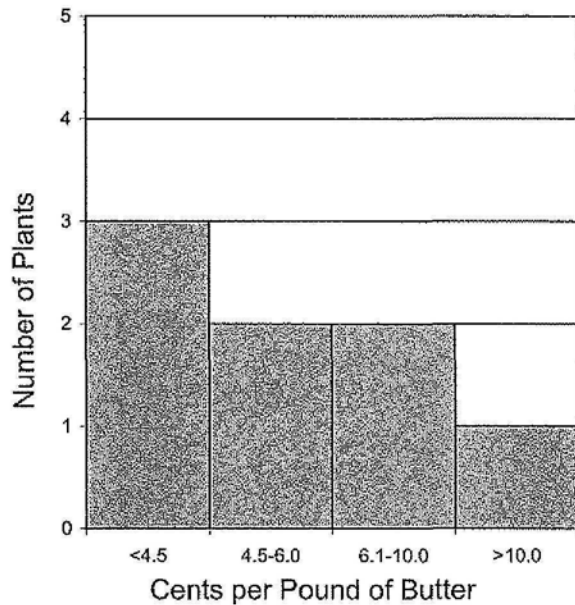


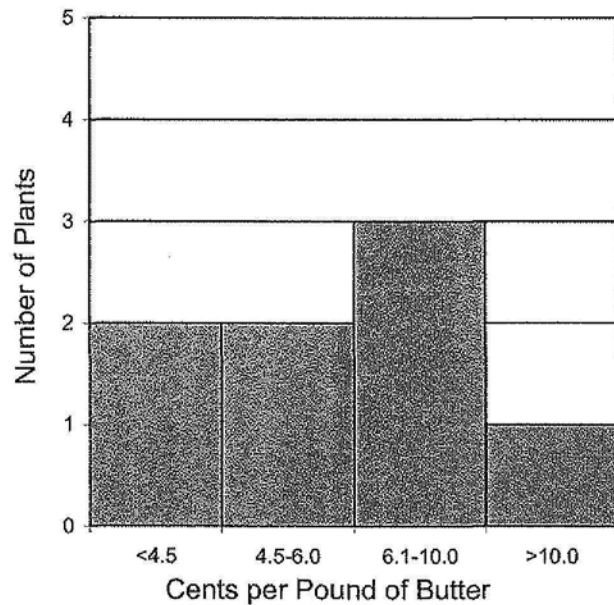
Figure 21. Processing Labor Cost per Pound



Average	=	6.9¢ per pound
Wt'd Average	=	5.1¢ per pound
Median	=	4.8¢ per pound
Average of low 4	=	4.5¢ per pound
Average of high 4	=	6.9¢ per pound

- Five plants had labor costs of 4.7¢ or more per pound.
- The average labor cost per pound for the high 4 plants was 53% higher than the average labor cost for the low 4 plants.

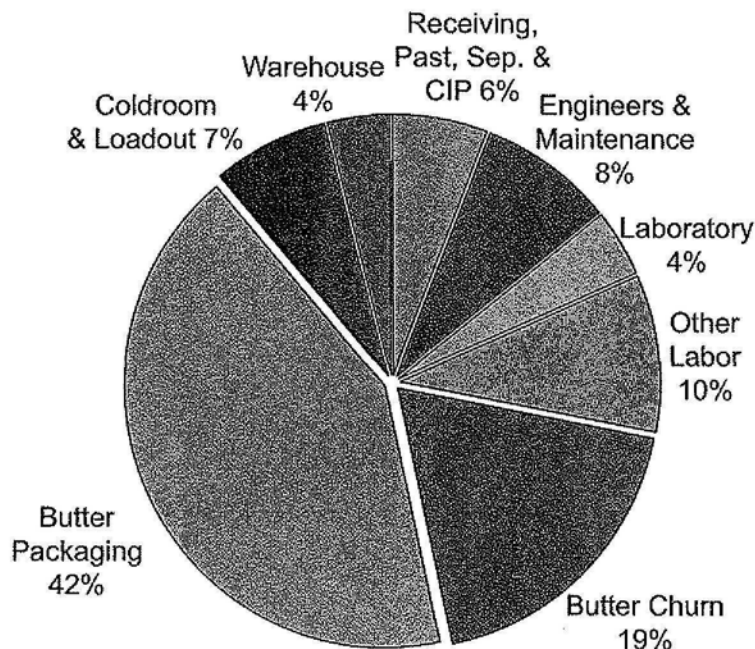
Figure 22. Processing Non-Labor Cost per Pound



Average	=	6.6¢ per pound
Wt'd Average	=	5.0¢ per pound
Median	=	6.2¢ per pound
Average of low 4	=	4.4¢ per pound
Average of high 4	=	9.0¢ per pound

- Processing non-labor costs were more variable than processing labor costs.
- Four of the plants had processing non-labor costs between 3¢ and 6¢ per pound.
- The average non-labor cost per pound for the high 4 plants was 41% higher than the average non-labor cost for the low 4 plants.

Figure 23. Butter Labor Breakdown by Category

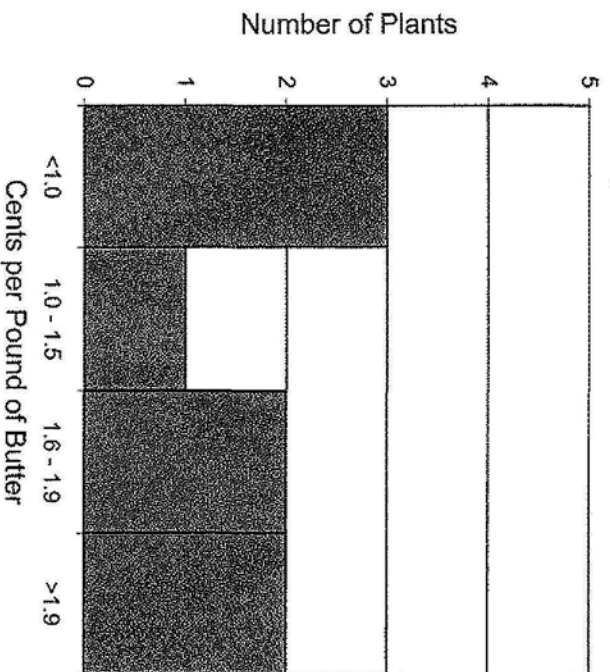


Based on detailed data:
 Labor cost averaged 6.9¢ per pound
 Labor cost averaged \$3.82 per 25 kg box

Note: "Other" includes plant manager/superintendent, general plant, and plant clerical

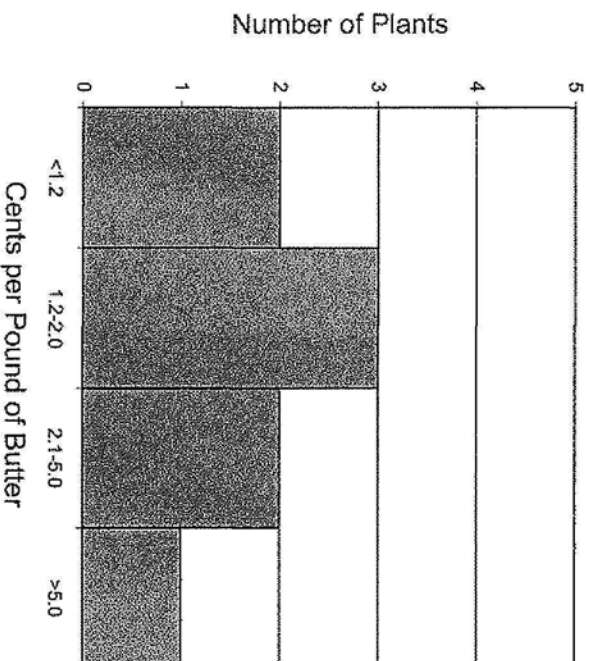


Figure 24. Utility Cost per Pound
Includes cost of natural gas, fuel oil, electricity, and sewage



- Utility cost per pound ranged from 0.7¢ to 3.6¢.
 - The average utility cost per pound for the high 4 plants was 130% higher than the average utility cost for the low 4 plants.
- | | | |
|-------------------|---|----------------|
| Average | = | 1.6¢ per pound |
| Wt'd Average | = | 1.1¢ per pound |
| Median | = | 1.6¢ per pound |
| Average of low 4 | = | 1.0¢ per pound |
| Average of high 4 | = | 2.3¢ per pound |

Figure 25. Repairs, Maintenance, and Supplies Cost per Pound



- Repair, maintenance, and supplies cost per pound ranged from 0.9¢ to 6.1¢ per pound.
 - Six plants had costs of more than 1.9¢ per pound.
 - Per-pound repairs and maintenance costs were not necessarily lower in the larger plants relative to the smaller plants.
- | | | |
|-------------------|---|----------------|
| Average | = | 2.4¢ per pound |
| Wt'd Average | = | 1.8¢ per pound |
| Median | = | 2.0¢ per pound |
| Average of low 4 | = | 1.5¢ per pound |
| Average of high 4 | = | 3.3¢ per pound |

Figure 26: Comparison of Payroll Breakdown for Plant Employees and Salaried Employees

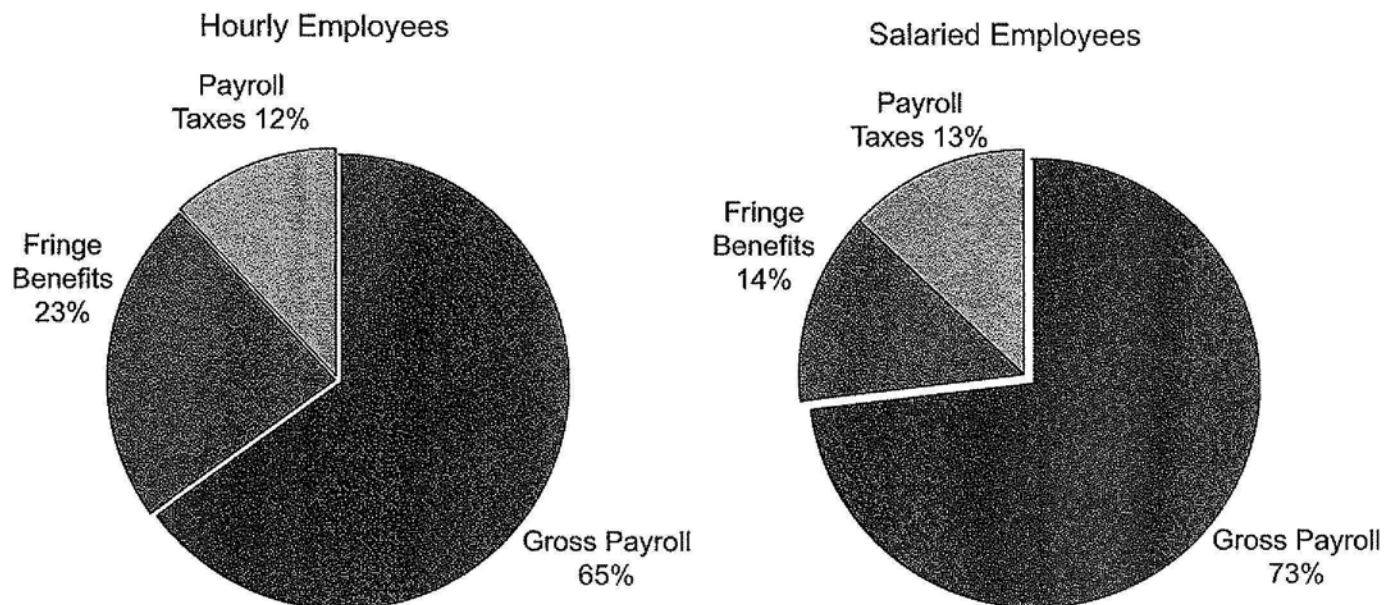
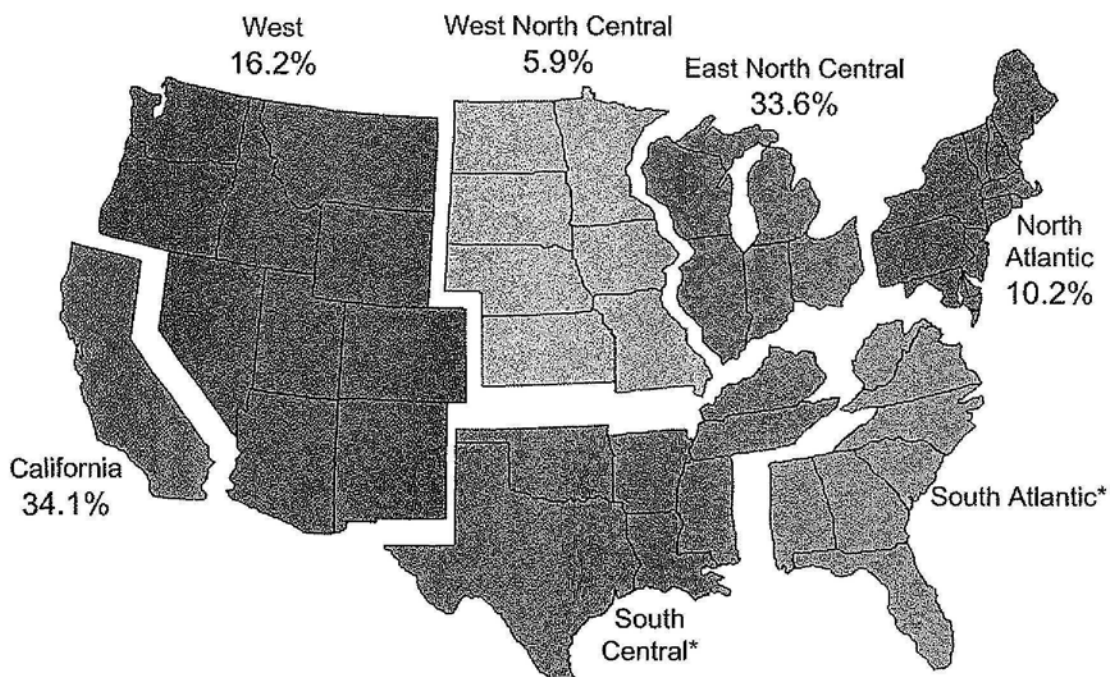


Figure 27. Share of Butter Production by Region, 2005



*Not disclosed for confidentiality reasons.

Nonfat Dry Milk Study

Cost studies were completed on ten nonfat dry milk (NFDM) plants for 2004. Plant cost summary statistics based on the study plants give an indication of plant size and per pound processing costs for various categories (Table 4). To avoid revealing plant-specific information, the ten plants were assigned to one of three groups according to total processing cost. Only costs for bagged NFDM were analyzed although high-volume totes are becoming more common in some plants (Figures 30 and 32).

- The data indicated that the lower cost NFDM plants in the state tended to be the larger plants. Specifically, the three low cost plants in the study produced 63 percent of the NFDM in California during the study period.
- Among the three cost groupings, labor cost was the single largest item that determined NFDM manufacturing cost. Processing labor ranged from a weighted average of 2.9¢ per pound in the low cost group to an average of 8.4¢ per pound in the high cost group, a 5.5¢ difference from the low cost group to the high cost group.
- Processing non-labor costs as a group were larger than labor costs but included several different plant expenses, such as utilities, depreciation, repairs and maintenance, laundry, supplies and plant insurance. These costs ranged from 7.8¢ per pound to 12.3¢ per pound, a 4.5¢ difference from the low cost group to the high cost group.
- The return on investment (ROI) allowance is calculated by subtracting accumulated depreciation from the original cost of assets. The remaining book value is multiplied by the Moody's "BAA" corporate bond index. Those amounts are then allocated to the products in the plant based on the same methods used to allocate the depreciation expense. The ROI costs for NFDM plants are up slightly from last year due to the change from Prime Rate to Moody's "BAA."
- Packaging costs were somewhat lower for the high cost groups; general and administrative costs were 12 percent lower in the high cost group compared to the medium cost group.



Table 4. Processing Costs for Ten California Nonfat Dry Milk Plants

1. Manufacturing cost data were collected and summarized from ten California nonfat powder plants. The ten plants processed 745 million pounds of nonfat powder during the study period, representing 99.2% of the nonfat powder processed in California.
2. The processing costs summarized in this study were incurred during a 12-month period, starting in January 2004 and concluding in December 2004.
3. The "Processing Non-Labor" category includes costs such as utilities, repairs and maintenance, supplies, depreciation and rent.
4. The volume total includes all grades of nonfat powder packaged in any container size, but the costs reflect only costs for 25 kg and 50 lb. bags of nonfat powder.
5. To obtain the weighted average, individual plant costs were weighted by their nonfat powder processing volume relative to the total volume of nonfat powder processed by all plants involved in the cost study.
6. The current manufacturing cost allowance for nonfat powder is \$0.152 per pound. About 63% of the nonfat powder was processed at a cost less than the manufacturing cost allowance.

Cost Groups	Number of Plants	Processing Labor	Processing Non-Labor	Package	General & Administrative	Return on Investment	Total Cost	Volume in Group
<i>dollars per pound of powder</i>								
Low Cost	3	\$0.0291	\$0.0784	\$0.0141	\$0.0089	\$0.0068	\$0.1373	468,014,288
Medium Cost	4	\$0.0360	\$0.0986	\$0.0152	\$0.0136	\$0.0099	\$0.1733	238,532,017
High Cost	3	\$0.0840	\$0.1228	\$0.0115	\$0.0121	\$0.0108	\$0.2412	38,852,610
<i>Summary Statistics</i>								
Weighted Average		\$0.0342	\$0.0872	\$0.0143	\$0.0106	\$0.0080	\$0.1543	
Range	Minimum	\$0.0283	\$0.0750	\$0.0096	\$0.0075	\$0.0032		
	Maximum	\$0.1037	\$0.1955	\$0.0158	\$0.0351	\$0.0157		
Total								745,398,915



Characteristics of Nonfat Dry Milk Plants

While the summary analyses of the cost studies that have been published historically have provided many insights into NFDM operations in California, they do not address some of the most basic features of the plants and how different costs compare among the plants in the study. In the following section, summary statistics are provided to indicate how much variation exists among NFDM plants. The weighted average is weighted by pounds of NFDM produced. The "median" indicates the point at which half of the plants above and half of the plants are below the given figure.

Throughout this section, column charts are used to show the distribution of plants within a specified category or the breakdown of costs by category. The charts give an indication of how much variation exists among the plants and the relative impact of individual cost categories.

Figure 28. Simplified Flowchart of a Butter and Nonfat Dry Milk Plant

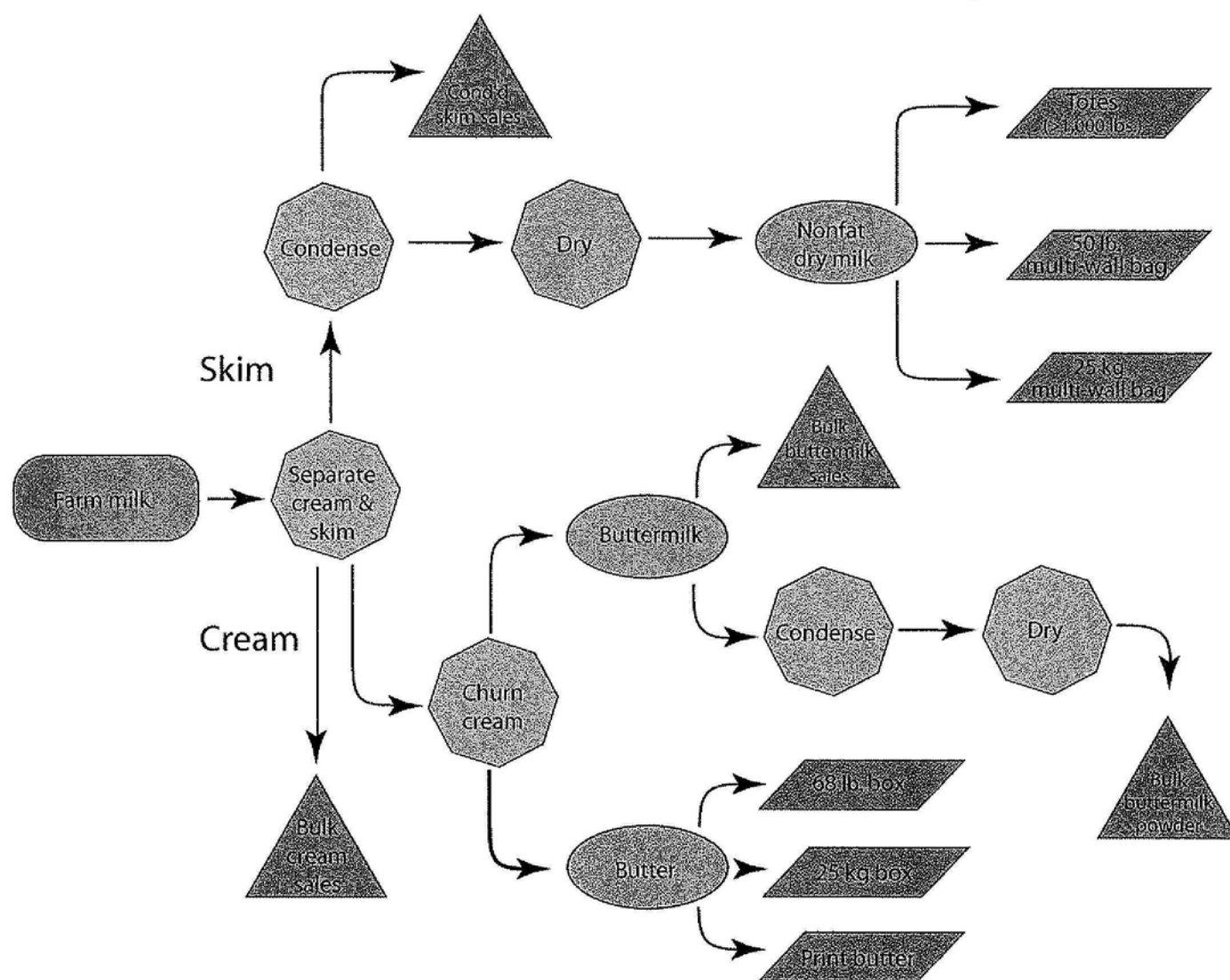


Figure 29. Breakdown of Nonfat Dry Milk Processing Costs

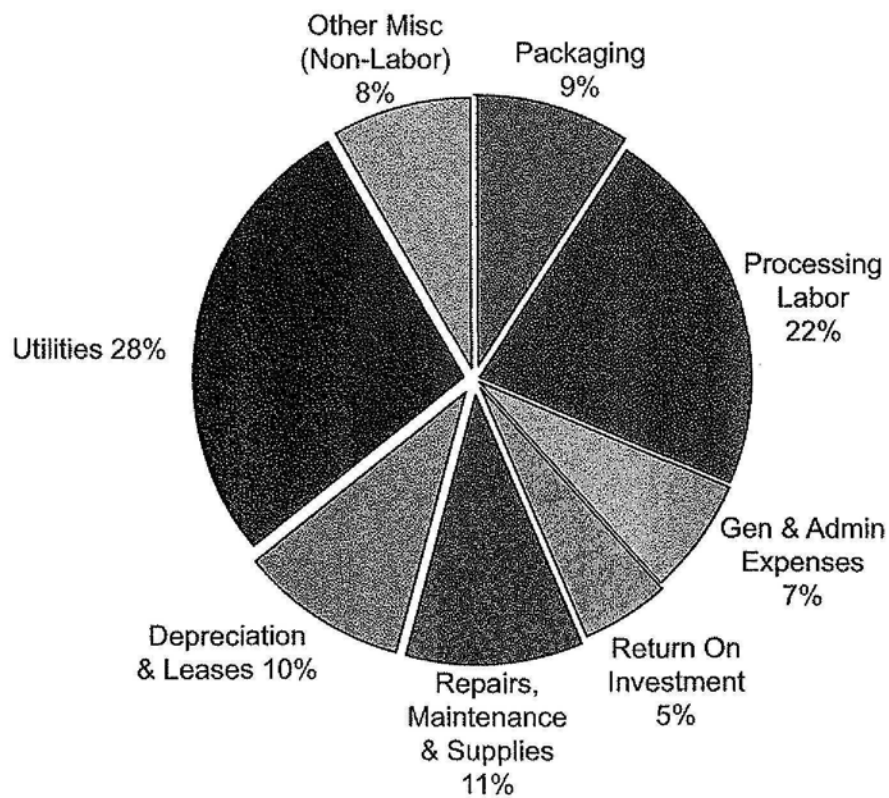


Figure 30. Breakdown of Nonfat Dry Milk Packaging Sizes

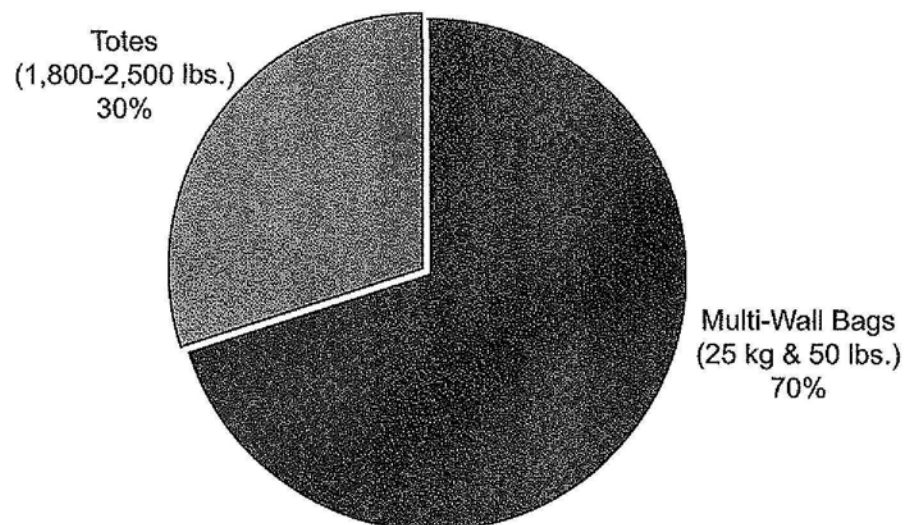
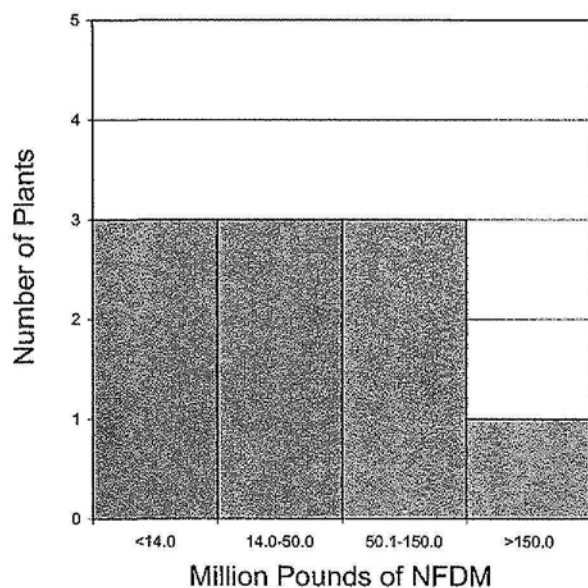


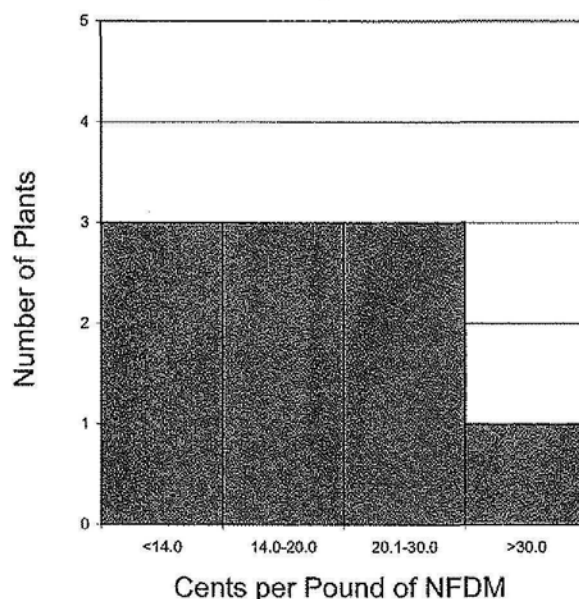
Figure 31. Annual California Nonfat Dry Milk Production



Average	=	75 million pounds
Median	=	39 million pounds
Average of low 3	=	11 million pounds
Average of high 3	=	166 million pounds

- Four plants produced more than 100 million pounds of NFDM annually which represents over 83% of total powder.
- On average, the three largest plants produced nearly 15 times more NFDM than the three smallest plants.

Figure 32. NFDM Manufacturing Cost per Pound



Average	=	19.2¢ per pound
Wt'd Average	=	15.4¢ per pound
Median	=	17.3¢ per pound
Average of low 3	=	13.7¢ per pound
Average of high 3	=	24.1¢ per pound

- Three plants produced NFDM for less than 14¢ per pound, and seven plants produced NFDM for more than 17¢ per pound.
- The four lowest volume plants were also the highest cost plants.
- The plants with the lowest processing labor costs had the lowest total manufacturing costs.

Figure 33. Share of California Nonfat Dry Milk Production by Ownership Type and by Workforce Type

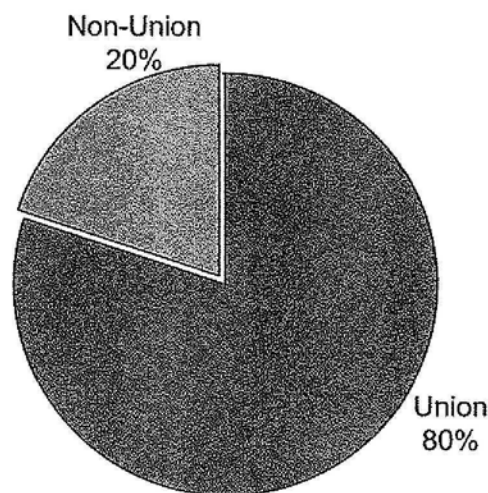
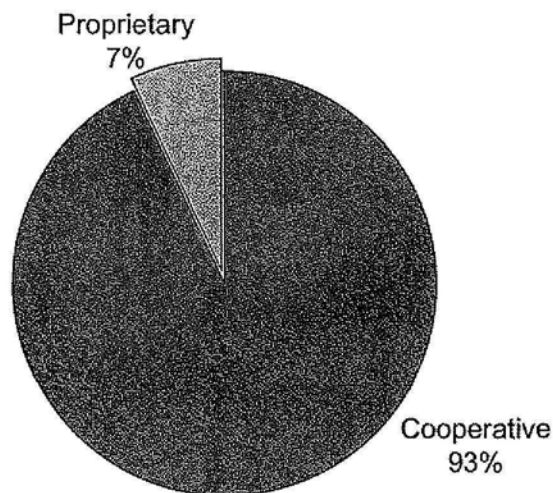
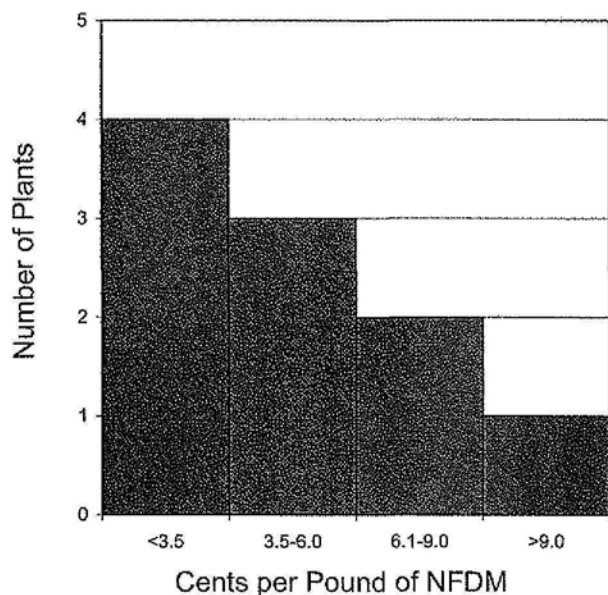


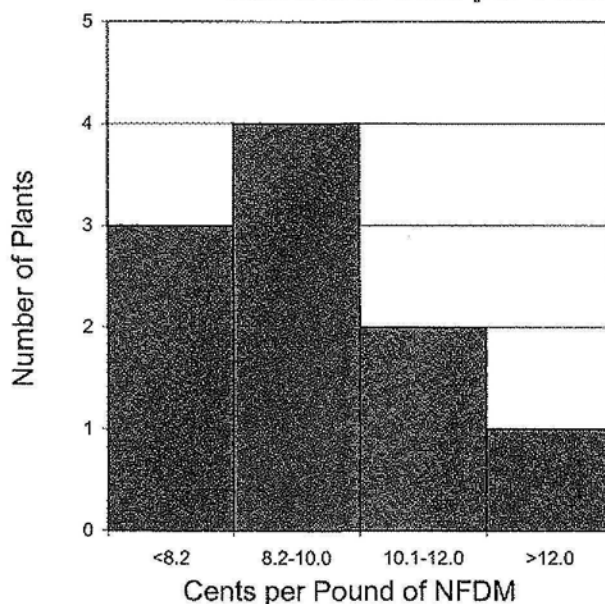
Figure 34. NFDM Processing Labor Cost per Pound



Average	=	5.2¢ per pound
Wt'd Average	=	3.4¢ per pound
Median	=	4.5¢ per pound
Average of low 3	=	2.9¢ per pound
Average of high 3	=	8.4¢ per pound

- Three out of ten plants had labor costs over 6¢ per pound.
- The average labor cost per pound for the high 3 plants was 190% higher than the average labor cost for the low 3 plants.

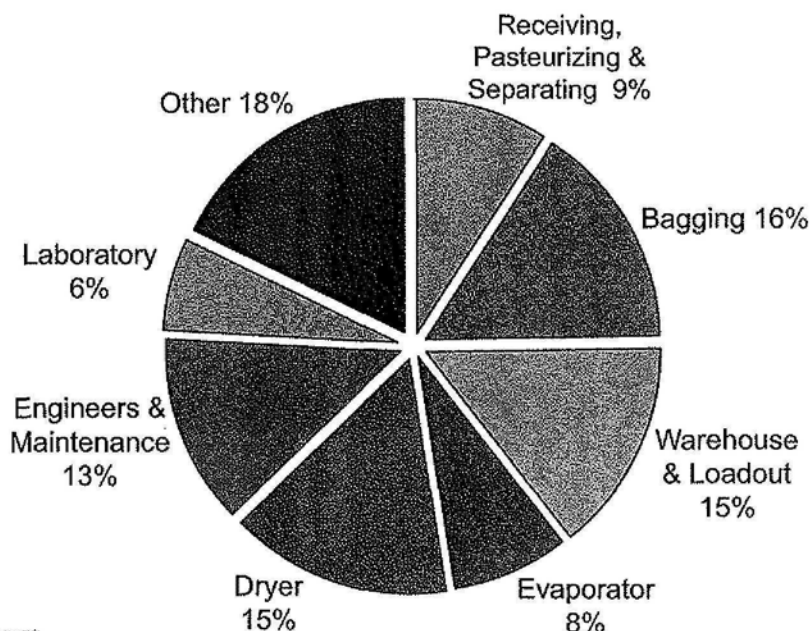
Figure 35. NFDM Processing Non-Labor Cost per Pound



Average	=	10.4¢ per pound
Wt'd Average	=	8.7¢ per pound
Median	=	9.6¢ per pound
Average of low 3	=	7.8¢ per pound
Average of high 3	=	12.3¢ per pound

- The variation in processing non-labor cost was much larger than other cost categories, ranging from 7.5¢ to 19.6¢ per pound.
- In higher cost plants, processing non-labor costs was 58% higher than labor costs.

Figure 36. Nonfat Dry Milk Labor Breakdown by Category



Based on detailed data:

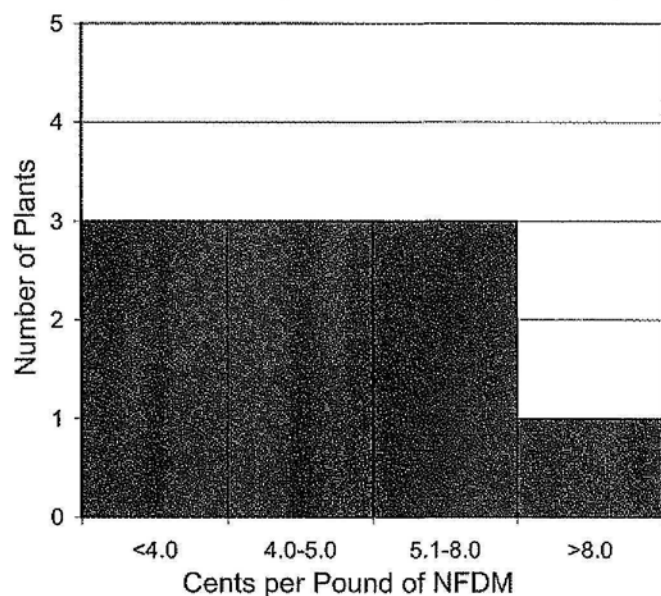
Labor cost averaged 5.2¢ per pound
Labor cost averaged \$2.86 per 25 kg bag

Note: "Other" includes plant manager/superintendent, general plant, plant clerical, and field men.



Figure 37. Utility Cost per Pound

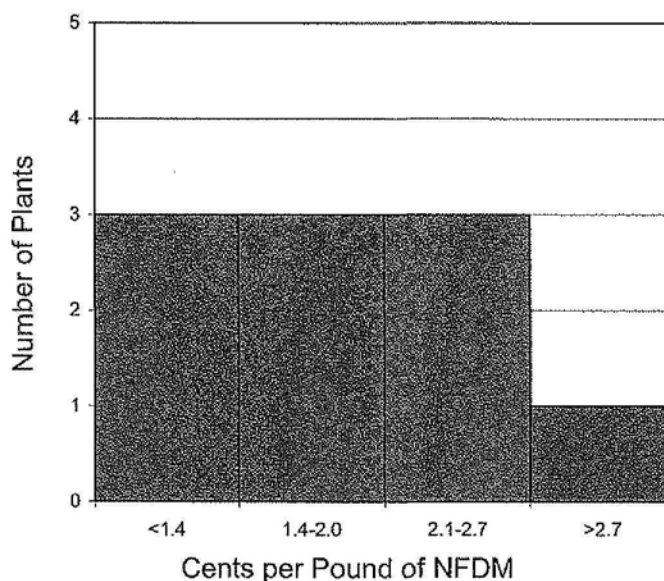
Includes cost of natural gas, fuel oil, electricity and sewage



Average	=	5.4¢ per pound
Wt'd Average	=	4.3¢ per pound
Median	=	4.5¢ per pound
Average of low 3	=	3.7¢ per pound
Average of high 3	=	8.1¢ per pound

- The operation of the dryer added significantly to the utility cost of the powder plants. Natural gas costs ranged from 26% to 75% of the total cost of utilities.
- Most of the plants had utility costs between 3¢ and 6¢ per pound.

Figure 38. Repairs, Maintenance, and Supplies Cost per Pound



Average	=	1.9¢ per pound
Wt'd Average	=	1.6¢ per pound
Median	=	2.0¢ per pound
Average of low 3	=	1.2¢ per pound
Average of high 3	=	2.5¢ per pound

- Five plants had costs less than 2.0¢ per pound.
- Cost of plant supplies exceeded repairs and maintenance by 40%.
- Per pound repairs and maintenance costs were lower in larger volume plants relative to smaller volume plants.

Figure 39. Weighted Average Breakdown of Dollars Spent per Year on Natural Gas and Electricity in NFDM Plants

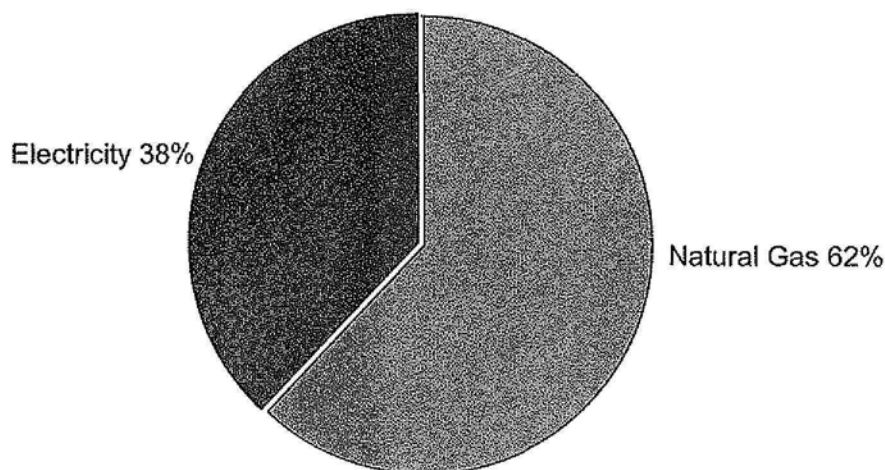


Figure 40: Comparison of Payroll Breakdown for Plant Employees and Salaried Employees

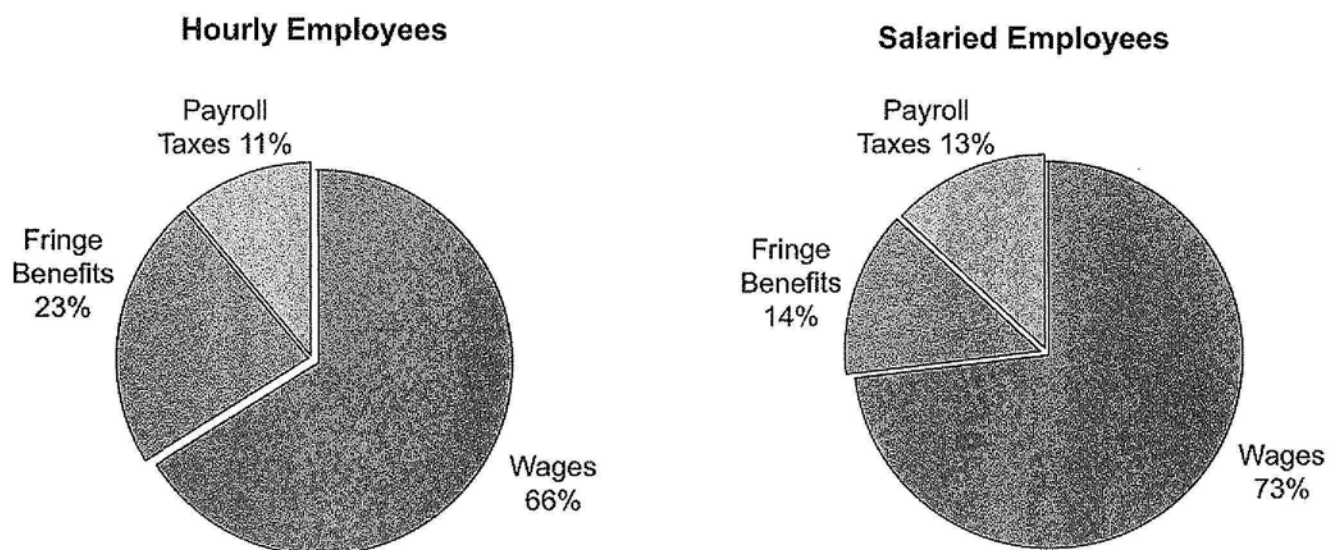
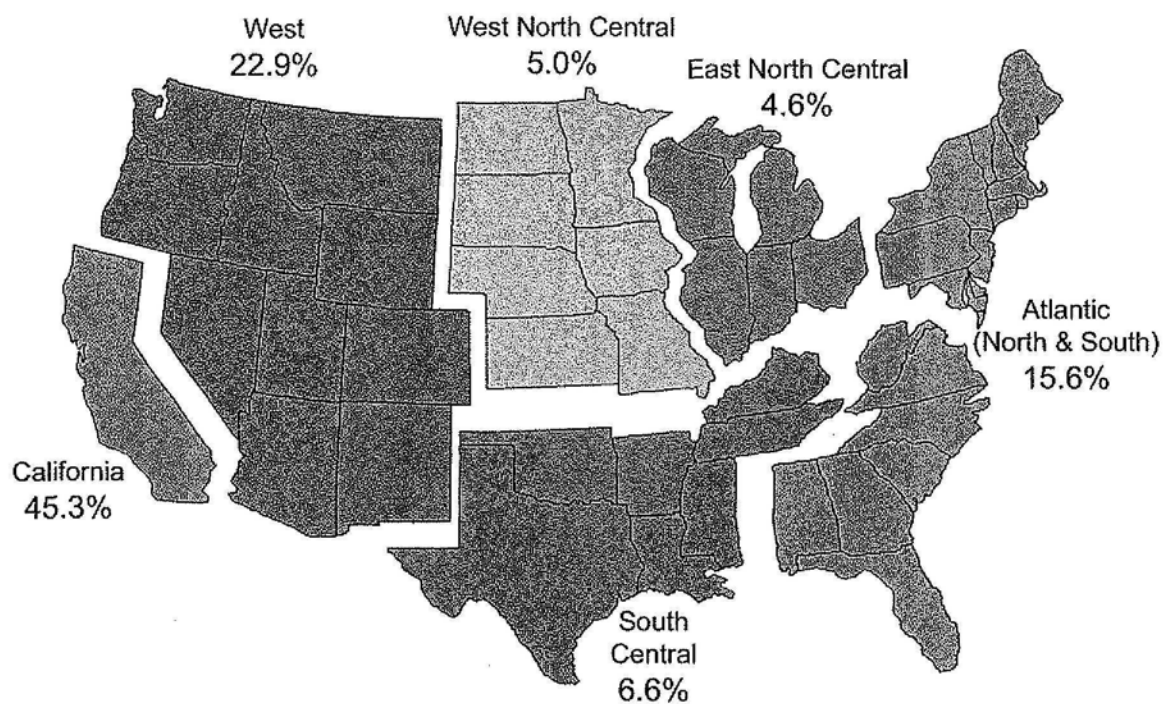


Figure 41. Share of NFDL Production, by Region, 2005



Skim Whey Powder Study

Cost studies were completed on three skim whey powder plants for 2004. Plant cost summary statistics based on the study plants give an indication of plant size and per pound processing costs for various categories (Table 5). Only costs for bagged skim whey powder were analyzed.

- The data indicated that the lower cost skim whey powder plant in the State tended to be the larger plant. Specifically, the low cost plant in the study produced the largest percent of the skim whey powder in California during the study period.
- Processing non labor cost was the largest item that determined whey manufacturing cost. Non labor costs averaged 14.9¢ per pound. Processing non labor costs included several different plant expenses, such as utilities, depreciation, repairs and maintenance, laundry, supplies and plant insurance.
- Processing labor costs as a group were smaller than non labor costs. These costs averaged 6.4¢ per pound.
- The return on investment (ROI) allowance is calculated by subtracting accumulated depreciation from the original cost of assets. The remaining book value is multiplied by the Moody's "BAA" corporate bond index. Those amounts are then allocated to the products in the plant based on the same methods used to allocate the depreciation expense.

Throughout this section, column charts are used to show the distribution of plants within a specified category or the breakdown of costs by category. The charts give an indication of how much variation exists among the plants and the relative impact of individual cost categories.

Table 5. Processing Costs for Three California Skim Whey Powder Plants

1. Manufacturing cost data was collected and summarized from three California skim whey powder plants. The three plants processed 93.2 million pounds of skim whey powder during the study period, representing 79% of the skim whey powder processed in California in 2004.
2. The "Processing Non-Labor" category includes costs such as utilities, repairs and maintenance, supplies, depreciation and rent.
3. The volume total includes skim whey powder packaged in container sizes of 25 kg and 50 lb. bags.
4. To obtain the weighted average, individual plant costs were weighted by their skim whey powder processing volume relative to the total volume of skim whey powder processed by all plants involved in the cost study.
5. The current manufacturing cost allowance for whey is \$0.20 per pound. All three plants processed skim whey powder at costs higher than the manufacturing cost allowance.

Cost Groups	Number of Plants	Processing Labor	Processing Non-Labor	Package	General & Administrative	Return on Investment	Total Cost	Volume in Group
<i>dollars per pound of skim whey powder</i>								
Weighted Average	3	\$0.0635	\$0.1488	\$0.0126	\$0.0026	\$0.0398	\$0.2673	93,271,893
Summary Statistics								
Range { Minimum		\$0.0487	\$0.1364	\$0.0091	\$0.0013	\$0.0314		
Maximum		\$0.0772	\$0.1921	\$0.0199	\$0.0049	\$0.0514		
Total								93,271,893



Figure 42. Breakdown of Skim Whey Powder Processing Costs

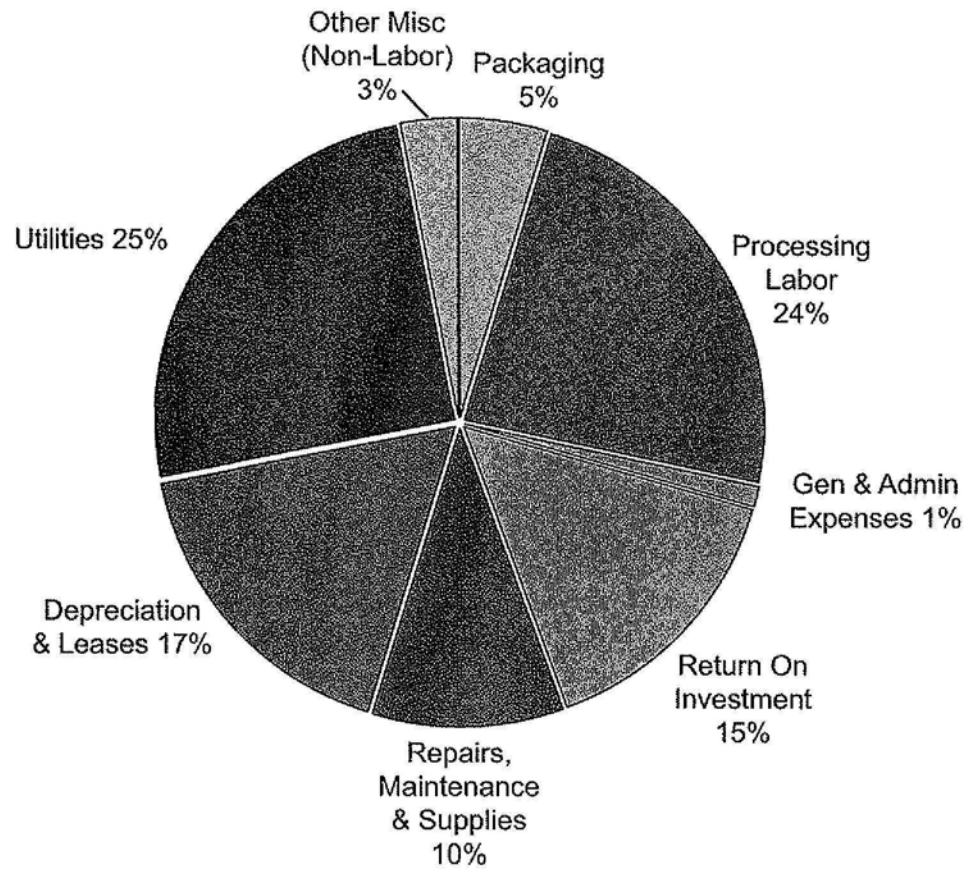


Figure 43. Weighted Average Breakdown of Dollars Spent per Year on Natural Gas and Electricity in Skim Whey Powder Plants

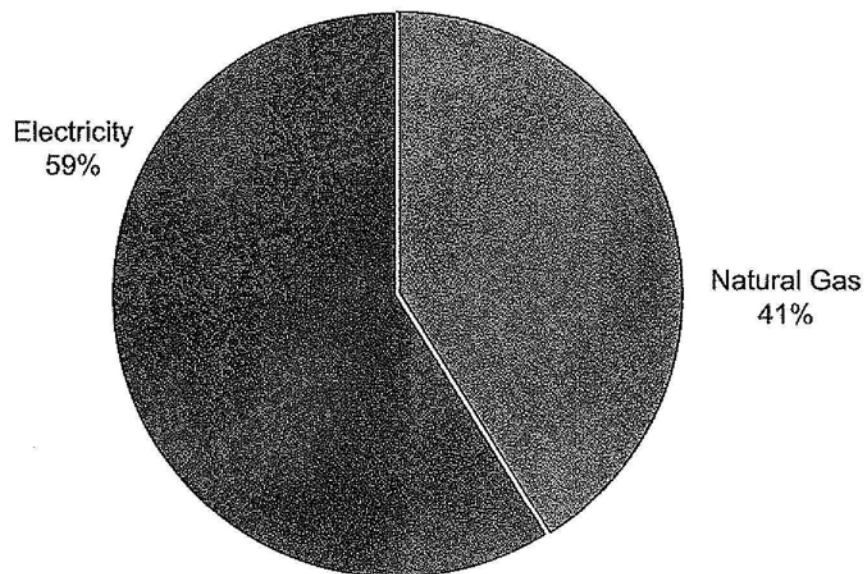


Figure 44. Share of California Skim Whey Powder Production by Ownership Type and by Workforce Type

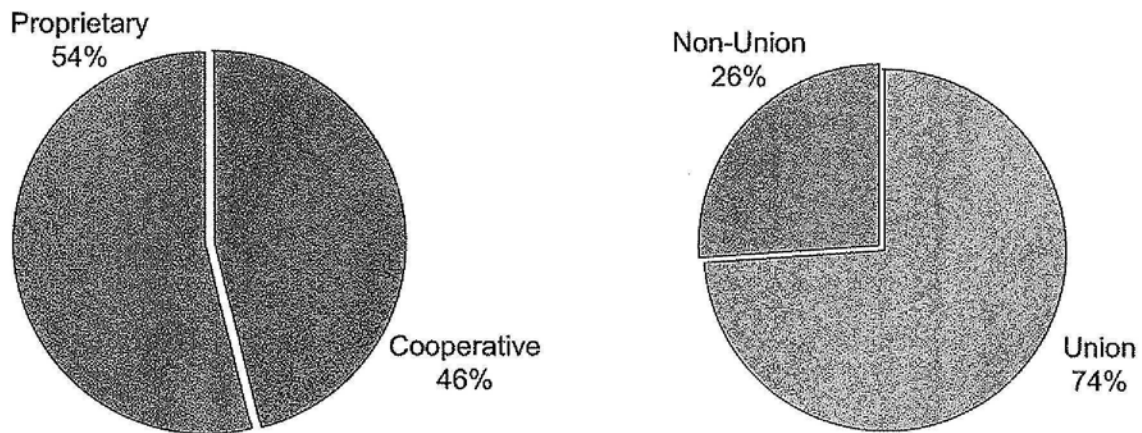


Figure 45. Skim Whey Powder Labor Breakdown by Category

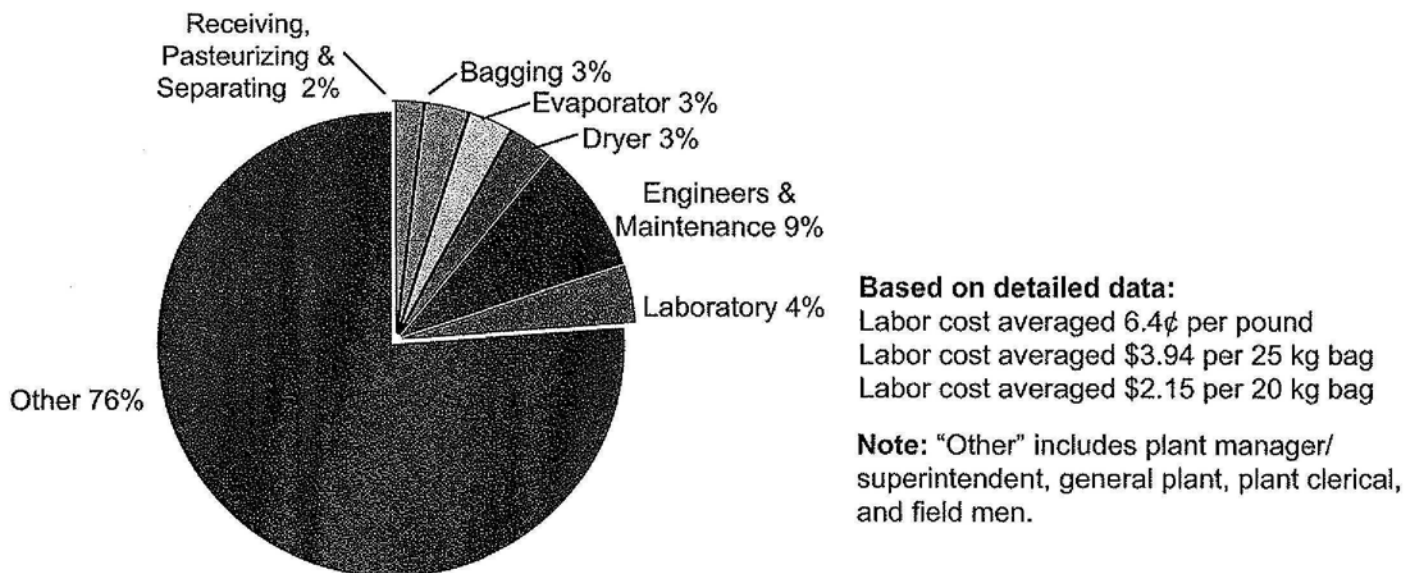
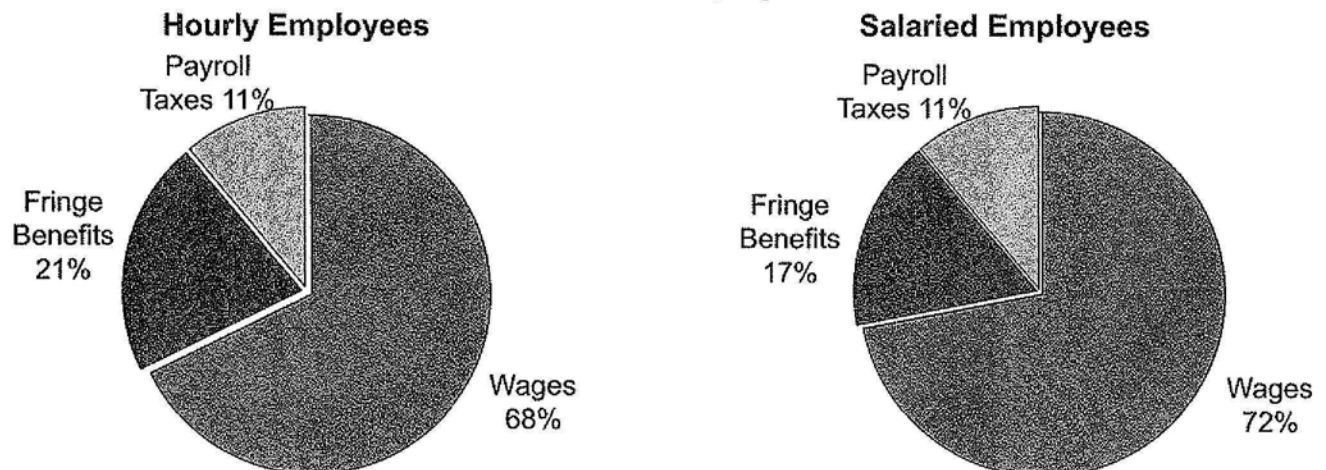


Figure 46: Comparison of Payroll Breakdown for Plant Employees and Salaried Employees



Condensed Skim and Cream Study

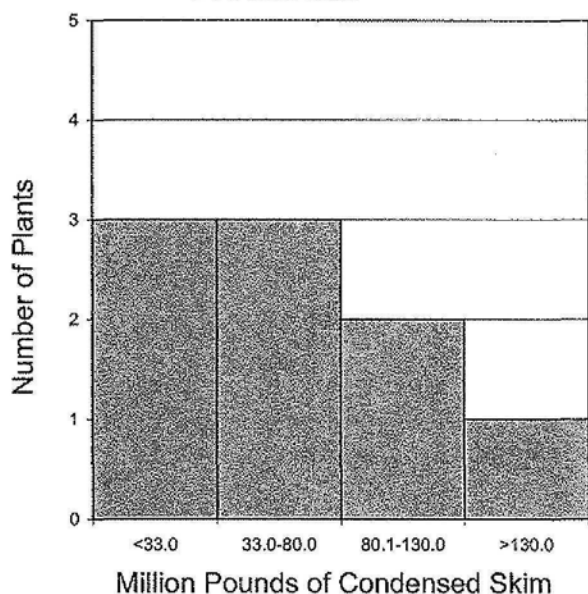
Most of the costs allocated to cream, condensed skim and other bulk dairy products come from general labor and general non-labor plant expenses. There are very little, if any, direct plant expenses allocated to these bulk fluid products. Because of the nature of allocating general plant expenses, the costs per pound of condensed skim and cream are not as precise compared to the costs per pound on packaged products such as butter, powder and cheese whose plant costs are largely composed of direct expenses.

Condensed Skim Overview

Cost studies were completed on nine condensed skim plants for 2004. In order not to reveal individual plant information, only general information is included in this section.

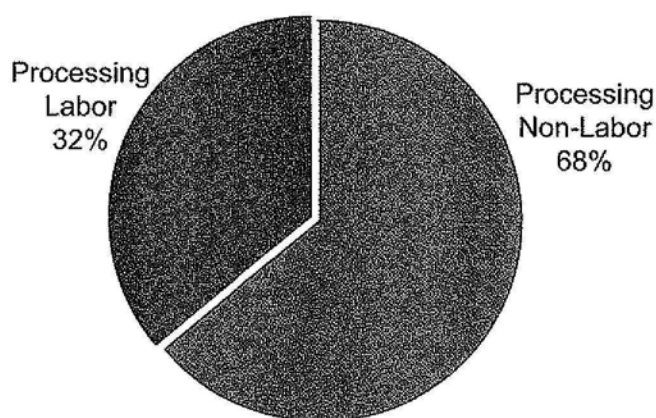
- Plants processed an average of 65 million pounds of condensed skim per year, but this statistic is somewhat misleading because of the tremendous disparity in actual processing volume. Two of the nine plants processed less than 20 million pounds per year, and three plants processed over 100 million pounds per year. The remaining four plants processed between 29 million and 80 million pounds per year.

Figure 47. Annual Condensed Skim Production



Average	=	65 million pounds
Median	=	37 million pounds
Average of low 3	=	14 million pounds
Average of high 3	=	132 million pounds

Figure 48. Comparison of Processing Costs for Condensed Skim



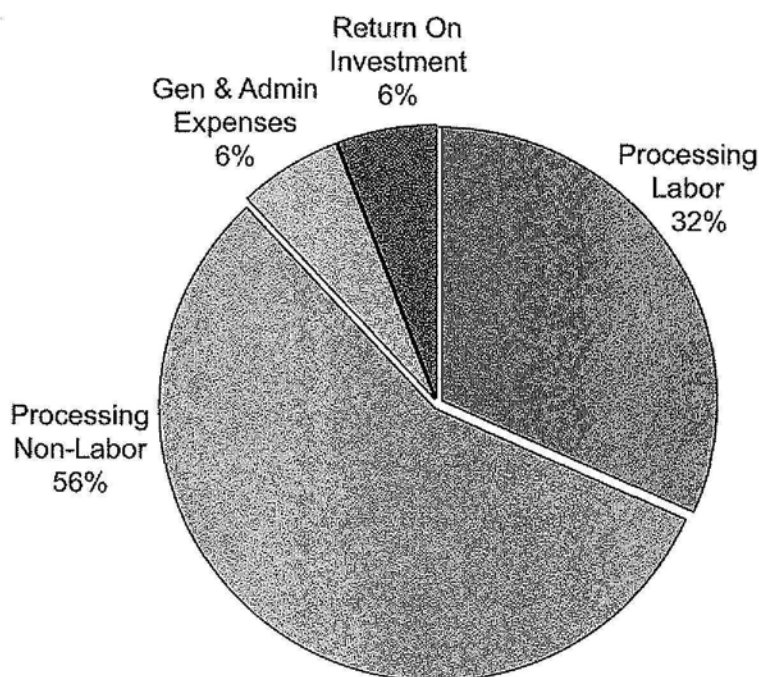
Processing non-labor includes utilities, depreciation, repairs and maintenance, laundry, supplies, and plant insurance

Low ratio = 22% Labor
78% Non-Labor

High ratio = 49% Labor
51% Non-Labor

- In general, processing non-labor costs for condensed skim production were about twice as large as labor costs but included several different plant expenses, such as utilities, depreciation, repairs and maintenance, laundry, supplies and plant insurance. Processing non-labor costs showed surprisingly little variation, ranging from 1.3¢ per pound to 2.8¢ per pound.

Figure 49. Breakdown of Condensed Skim Processing Costs

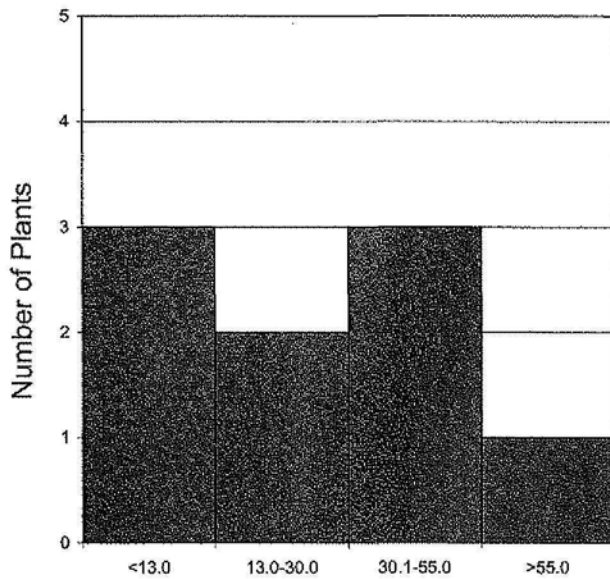


Cream Overview

Cost studies were completed on nine cream plants for 2004. So as not to reveal individual plant information, only general information is included in this section.

- Plants processed an average of 32 million pounds of cream per year. Unlike condensed skim processing, the range of cream volumes was relatively narrow.
- In general, processing non-labor costs as a group were about 56 percent higher than labor costs but included several different plant expenses, such as utilities, depreciation, repairs and maintenance laundry, supplies and plant insurance.

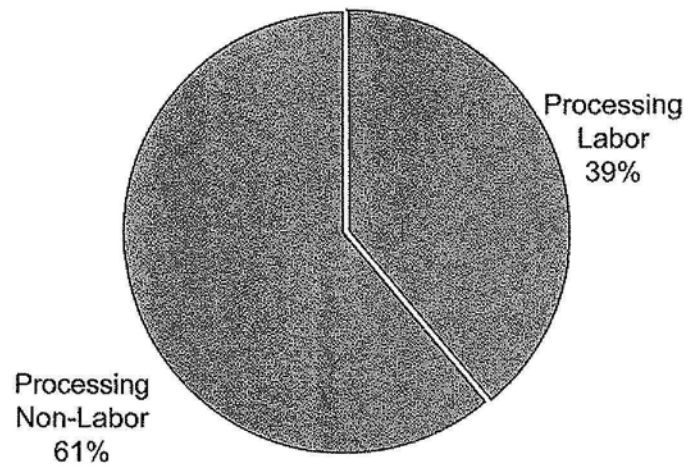
Figure 50. Annual Cream Production



Million Pounds of Cream

Average	=	32 million pounds
Median	=	30 million pounds
Average of low 3	=	9 million pounds
Average of high 3	=	60 million pounds

Figure 51. Comparison of Processing Costs for Cream

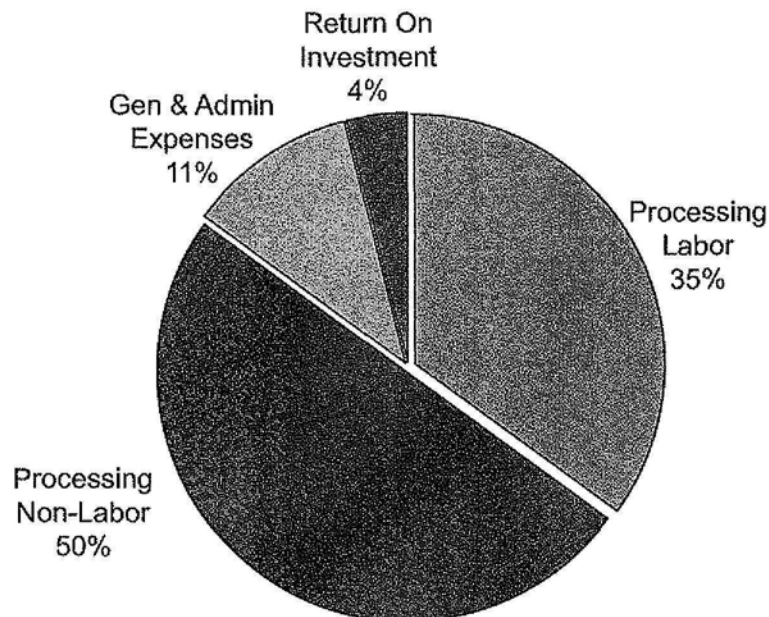


Processing non-labor includes utilities, depreciation, repairs and maintenance, laundry, supplies, and plant insurance

Low ratio = 29% Labor
71% Non-Labor

High ratio = 52% Labor
48% Non-Labor

Figure 52. Breakdown of Cream Processing Costs





Manufacturing Cost Unit
Dairy Marketing Branch
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814-5621

HHH

Table 1. Processing Costs for Seven California Cheddar Cheese Plants**CHEESE MANUFACTURING COSTS**

CURRENT Study Period: January through December 2005
 With Comparison to the same time period PRIOR YEAR (2004)

- Manufacturing cost data were collected and summarized from seven California cheese plants. The seven plants processed 826 million pounds of cheese during the 12-month study period, January through December 2005, representing 96.7% of the Cheddar and Monterey Jack cheese processed in California.
- The volume total includes both Cheddar and Monterey Jack cheeses, but the costs reflect only costs for 40 lb. blocks of Cheddar.
- Three plants processed 500-lb. barrels or 640-lb. blocks. Packaging costs and packaging labor for 40-lb. blocks were substituted for these plants.
- To obtain the weighted average, individual plant costs were weighted by their cheese processing volume relative to the total volume of cheese processed by all plants included in the cost study.
- For all cheese: the weighted average yield was 11.89 lbs. of cheese per hundredweight of milk. The weighted average moisture was 37.22% and weighted average vat tests were 4.35% fat and 9.30% SNF.
 - For 40-lb. blocks: the weighted average yield was 12.20 lbs. of cheese per hundredweight of milk. The weighted average moisture was 38.04% and weighted average vat tests were 4.29% fat and 9.17% SNF.
- For this study period, approximately 0% of the cheese was processed at a cost less than the current manufacturing cost allowance for cheese of \$0.178 per pound.

Breakdown of Cheese Manufacturing Costs - January through December 2005

Categories	Low Cost Group	High Cost Group	Range of Costs		CURRENT Weighted Average Cost All Plants Jan-Dec 2005	PRIOR YEAR Weighted Average Cost All Plants Jan-Dec 2004	Actual Difference Current Less Prior Year
			Minimum	Maximum			
	Dollars Per Pound of Cheese						
Number of Plants	3	4	7	7	7	7	--
Processing Labor	\$0.0413	\$0.0621	\$0.0378	\$0.0739	\$0.0498	\$0.0469	\$0.0029
Processing Non-Labor	\$0.0887	\$0.0796	\$0.0570	\$0.0910	\$0.0850	\$0.0719	\$0.0131
Packaging	\$0.0215	\$0.0162	\$0.0126	\$0.0231	\$0.0193	\$0.0186	\$0.0007
Other Ingredients	\$0.0099	\$0.0143	\$0.0074	\$0.0287	\$0.0117	\$0.0110	\$0.0007
General & Administrative	\$0.0188	\$0.0154	\$0.0083	\$0.0303	\$0.0174	\$0.0203	-\$0.0029
Return on Investment	\$0.0077	\$0.0090	\$0.0028	\$0.0125	\$0.0082	\$0.0082	\$0.0000
Average Total Cost	\$0.1879	\$0.1966	--	--	\$0.1914	\$0.1769	\$0.0145
Volumn in Group (Lbs.)	488,770,657	337,812,843	--	--	826,583,500	817,068,328	--
% Volume by Group	59.1%	40.9%	--	--	100.0%	100.0%	--

Processing Labor: Labor costs associated with processing of product, including wages, payroll taxes and fringe benefits.

Processing Non-Labor: Includes costs such as utilities, repairs and maintenance, laundry, supplies, depreciation, plant insurance, and rent.

Packaging: Includes all non-reusable items used in the packaging of the product, such as boxes, bags, cartons, liners, tape, glue and stretch wrap.

Other Ingredients: Includes salt, color, and rennet.

General & Administrative: Includes expenses in the management of the company, such as: office supplies, short-term interest, dues and subscriptions, accounting fees, headquarter charges, office clerical wages and executive salaries.

Return on Investment: Calculated by subtracting accumulated depreciation from the original cost of assets, with the remaining book value multiplied by Moody's "BAA" corporate bond index.

Estimating California Butterfat Recovery

Table 1
Summary of Yields Reported by CDFA

Year	Exh.	Yield	Moisture	Vat BF%	Vat SNF %
2002	FFF	10.95	37.08%	3.95%	8.95%
2003	GGG	10.92	37.12%	3.94%	8.95%
2004	HHH	11.53	37.04%	4.02%	9.05%
2005	III	11.89	37.22%	4.35%	9.30%

Table 2
Summary of Component Tests Reported by DHIA California

Year	BF%	Protein %	Total SNF%
2002	3.66%	3.14%	8.89%
2003	3.66%	3.13%	8.82%
2004	3.68%	3.15%	8.80%
2005	3.68%	3.14%	8.83%

CDFA Class Utilization 2002-2005

Month	FAT					SNF					Total Solids				
	Class 1	Class 2	Class 3	Class 4a	Class 4b	Class 1	Class 2	Class 3	Class 4a	Class 4b	Class 1	Class 2	Class 3	Class 4a	Class 4b
Feb-02	11.50	4.33	8.49	35.60	40.08	11.50	4.33	8.49	35.60	40.08	11.50	4.33	8.49	35.60	40.08
Mar-02	11.16	4.45	8.82	35.79	39.78	11.16	4.45	8.82	35.79	39.78	11.16	4.45	8.82	35.79	39.78
Apr-02	11.39	4.60	9.26	34.61	40.14	11.39	4.60	9.26	34.61	40.14	11.39	4.60	9.26	34.61	40.14
May-02	11.41	4.96	8.69	34.17	40.77	11.41	4.96	8.69	34.17	40.77	11.41	4.96	8.69	34.17	40.77
Jun-02	11.01	4.78	9.07	33.70	41.44	11.01	4.78	9.07	33.70	41.44	11.01	4.78	9.07	33.70	41.44
Jul-02	11.99	4.99	8.52	32.14	42.36	11.99	4.99	8.52	32.14	42.36	11.99	4.99	8.52	32.14	42.36
Aug-02	11.86	4.73	8.37	31.51	43.53	11.86	4.73	8.37	31.51	43.53	11.86	4.73	8.37	31.51	43.53
Sep-02	12.22	4.85	7.88	29.69	45.36	12.22	4.85	7.88	29.69	45.36	12.22	4.85	7.88	29.69	45.36
Oct-02	12.25	5.64	7.53	31.39	43.19	12.25	5.64	7.53	31.39	43.19	12.25	5.64	7.53	31.39	43.19
Nov-02	11.67	6.47	6.34	30.69	44.83	11.67	6.47	6.34	30.69	44.83	11.67	6.47	6.34	30.69	44.83
Dec-02	11.48	5.99	5.44	34.34	42.75	11.48	5.99	5.44	34.34	42.75	11.48	5.99	5.44	34.34	42.75
Jan-03	11.31	4.91	7.71	34.53	41.54	11.31	4.91	7.71	34.53	41.54	11.31	4.91	7.71	34.53	41.54
Feb-03	11.20	4.79	7.75	35.27	40.99	11.20	4.79	7.75	35.27	40.99	11.20	4.79	7.75	35.27	40.99
Mar-03	11.16	4.73	7.47	35.01	41.63	11.16	4.73	7.47	35.01	41.63	11.16	4.73	7.47	35.01	41.63
Apr-03	11.16	4.94	8.71	33.31	41.88	11.16	4.94	8.71	33.31	41.88	11.16	4.94	8.71	33.31	41.88
May-03	11.29	4.80	8.67	31.81	43.43	11.29	4.80	8.67	31.81	43.43	11.29	4.80	8.67	31.81	43.43
Jun-03	11.69	5.12	10.64	26.12	46.43	11.69	5.12	10.64	26.12	46.43	11.69	5.12	10.64	26.12	46.43
Jul-03	12.05	5.58	12.62	23.67	46.08	12.05	5.58	12.62	23.67	46.08	12.05	5.58	12.62	23.67	46.08
Aug-03	11.85	5.47	10.70	26.14	45.84	11.85	5.47	10.70	26.14	45.84	11.85	5.47	10.70	26.14	45.84
Sep-03	12.31	5.09	9.82	26.95	45.83	12.31	5.09	9.82	26.95	45.83	12.31	5.09	9.82	26.95	45.83
Oct-03	12.75	5.67	8.17	28.99	44.42	12.75	5.67	8.17	28.99	44.42	12.75	5.67	8.17	28.99	44.42
Nov-03	11.63	6.55	6.98	30.89	43.95	11.63	6.55	6.98	30.89	43.95	11.63	6.55	6.98	30.89	43.95
Dec-03	11.50	6.24	5.54	32.87	43.85	11.50	6.24	5.54	32.87	43.85	11.50	6.24	5.54	32.87	43.85
Jan-04	11.36	4.66	6.93	32.97	44.08	11.36	4.66	6.93	32.97	44.08	11.36	4.66	6.93	32.97	44.08
Feb-04	11.29	5.51	8.43	32.20	42.57	11.29	5.51	8.43	32.20	42.57	11.29	5.51	8.43	32.20	42.57
Mar-04	11.51	6.49	14.58	24.14	43.28	11.51	6.49	14.58	24.14	43.28	11.51	6.49	14.58	24.14	43.28
Apr-04	10.50	5.88	11.68	28.66	43.28	10.50	5.88	11.68	28.66	43.28	10.50	5.88	11.68	28.66	43.28
May-04	8.76	5.56	11.46	29.87	44.35	8.76	5.56	11.46	29.87	44.35	8.76	5.56	11.46	29.87	44.35
Jun-04	9.24	5.15	8.33	34.13	43.15	9.24	5.15	8.33	34.13	43.15	9.24	5.15	8.33	34.13	43.15
Jul-04	9.52	4.98	7.32	34.85	43.33	9.52	4.98	7.32	34.85	43.33	9.52	4.98	7.32	34.85	43.33
Aug-04	10.23	5.37	7.61	33.35	43.44	10.23	5.37	7.61	33.35	43.44	10.23	5.37	7.61	33.35	43.44
Sep-04	10.24	5.06	7.37	33.02	44.31	10.24	5.06	7.37	33.02	44.31	10.24	5.06	7.37	33.02	44.31
Oct-04	9.65	5.71	6.70	34.53	43.41	9.65	5.71	6.70	34.53	43.41	9.65	5.71	6.70	34.53	43.41
Nov-04	9.52	8.12	6.02	31.11	45.23	9.52	8.12	6.02	31.11	45.23	9.52	8.12	6.02	31.11	45.23
Dec-04	9.38	6.02	4.02	33.89	46.69	9.38	6.02	4.02	33.89	46.69	9.38	6.02	4.02	33.89	46.69
Jan-05	9.13	4.31	5.17	34.57	46.82	9.13	4.31	5.17	34.57	46.82	9.13	4.31	5.17	34.57	46.82
Feb-05	9.20	5.04	6.33	34.28	45.15	9.20	5.04	6.33	34.28	45.15	9.20	5.04	6.33	34.28	45.15
Mar-05	9.19	5.32	7.25	32.98	45.26	9.19	5.32	7.25	32.98	45.26	9.19	5.32	7.25	32.98	45.26
Apr-05	8.61	4.68	7.70	32.94	46.07	8.61	4.68	7.70	32.94	46.07	8.61	4.68	7.70	32.94	46.07
May-05	8.79	5.13	8.12	31.68	46.28	8.79	5.13	8.12	31.68	46.28	8.79	5.13	8.12	31.68	46.28



CALIFORNIA DEPARTMENT OF
FOOD AND AGRICULTURE

TM

**CALIFORNIA DEPARTMENT OF
FOOD AND AGRICULTURE**
A.G. Kawamura
Secretary

**DIVISION OF MARKETING
SERVICES**
Kelly Krug, Director

MILK POOLING BRANCH
John Lee, Chief

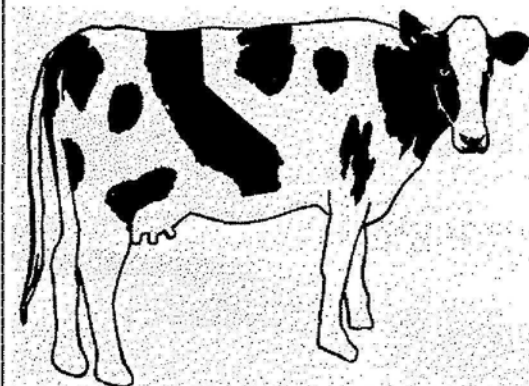
California Milk Quota Transfers

	2004	2005
Total Sellers	72	65
Total Buyers	108	79
Ave. Price w/o cows	\$460/lb.	\$478/lb.
SNF Quota Transferred	77,498 lbs.	60,243 lbs.



Produced by the Milk Pooling Branch
January 2006

LLL



Milk Pooling Comparative Statement 2004-2005

Milk Pooling Branch
(916) 341-5901
pooling@cdfa.ca.gov
www.cdfa.ca.gov/dairy

Pool Production

2004 2005 % Change

Milk Production

Pounds	35.25 Billion	35.68 Billion	1.20%
Fat	1.29 Billion	1.31 Billion	0.92%
SNF	3.10 Billion	3.14 Billion	1.34%

Quota Production

Fat	322.4 Million	322.2 Million	-0.07%
SNF	785.5 Million	785.5 Million	0.00%

Non-Quota Production

Fat	955.9 Million	983.8 Million	2.92%
SNF	2,273 Million	2,352 Million	3.50%

Other Source Receipts into California

Fat	47.2 Million	45.0 Million	-4.83%
SNF	118.5 Million	106.2 Million	-10.39%

Cooperative Production

Pounds	27.8 Billion	28.9 Billion	4.01%
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Producer-Handler Production

Option 70	255.6 Million	256.0 Million	0.16%
Exempt	1.2 Million	1.4 Million	13.15%

Pool Utilization

2004 2005 % Change

Class 1

Fat	130.8 Million	119.7 Million	-8.52%
SNF	560.3 Million	532.0 Million	-5.06%

Class 2

Fat	73.9 Million	73.6 Million	-0.42%
SNF	112.2 Million	118.8 Million	5.86%

Class 3

Fat	108.5 Million	95.3 Million	-12.20%
SNF	84.9 Million	85.2 Million	.36%

Class 4a

Fat	413.4 Million	424.9 Million	2.80%
SNF	877.7 Million	850.4 Million	-3.12%

Class 4b

Fat	568.8 Million	592.6 Million	4.18%
SNF	1,461 Million	1,551 Million	6.16%

Class 1 Fortification

Powder	2.28 Million	2.50 Million	9.73%
Condensed	65.4 Million	63.8 Million	-2.52%

Pool Dollars

2004 2005 % Change

Quota Milk

Fat	\$631.7 Million	\$538.6 Million	-14.74%
SNF	\$789.2 Million	\$813.7 Million	3.11%

Base Milk

Fat	\$3.5 Million	\$2.9 Million	-18.06%
SNF	\$3.0 Million	\$3.1 Million	2.96%

Overbase Milk

Fat	\$1,869 Million	\$1,640 Million	-12.28%
SNF	\$1,839 Million	\$1,976 Million	7.46%

Regional Quota Adjusters

All Areas	\$12.2 Million	\$12.7 Million	3.84%
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Transportation Allowances

No. Calif.	\$3.85 Million	\$4.53 Million	17.74%
So. Calif.	\$13.48 Million	\$16.86 Million	25.06%

Additional California Dairy Statistics Found At:

<http://www.cdffa.ca.gov/dairy/>



CALIFORNIA DHIA PROGRAM

2002 COW SUMMARY

For browsers that do not support tables,
view the [plain text](#) version of this file

	TOTAL COWS	TOTAL HERDS	COWS/ HERD	% DRY	% LEFT	MILK POUNDS	FAT %	FAT LBS	PRO %	PRO LBS	SNF %	SNF LBS	RHA SCC	CALV INT	AGE@ CALV	DA DI
BY ASSOCIATION																
ARCATA	853	5	171	17	19	15347	3.99	612	3.75	602	8.76	1404	303	13.5	56.5	70
CHURCHILL	9379	16	586	13	30	22456	3.56	800	3.07	688			373	14.4	47.2	66
DEL NORTE	3517	5	703	13	30	19610	3.80	745	3.22	631			308	13.7	41.3	65
EASTERN NEW MEXICO	39792	22	1809	14	33	21700	3.58	777	3.10	674			328	13.8	41.9	70
FRESNO	104224	123	847	14	37	22543	3.56	803	3.17	734	9.03	1931	269	13.8	44.6	68
KINGS	94514	89	1062	14	36	22520	3.68	829	3.10	717	8.88	1860	260	13.8	43.0	68
MARICOPA	19949	16	1247	11	30	22098	3.53	780	3.03	671	9.29	1320	302	13.5	47.5	61
MERCED	118180	191	619	14	33	21790	3.82	832	3.22	703	8.78	1789	270	13.8	44.3	66
NORTH BAY	32132	84	383	15	30	22451	3.59	806	3.18	715	9.02	2030	248	13.8	49.4	67
OREGON	22263	141	158	13	29	20262	4.00	810	3.21	650			231	13.8	46.2	62
SOUTHERN COUNTIES	134801	101	1335	15	32	22046	3.61	795	3.12	684	8.76	1924	299	13.9	44.1	71
STANISLAUS	94813	139	682	14	32	22800	3.65	833	3.07	689	8.75	2134	251	13.9	44.0	65
WILLAMETTE	36275	118	307	13	33	23611	3.73	880	3.11	734			242	14.1	43.1	64
BY STATE																
ARIZONA	17241	8	2155	11	28	22661	3.47	787	2.98	675			306	13.6	47.2	61
CALIFORNIA	585742	745	786	14	34	22263	3.66	815	3.15	702	8.89	1955	271	13.8	44.3	68
KANSAS	1683	1	1683	13	25	23628	3.66	864	3.23	763			350	14.1	45.4	69

MMM

NEVADA	9379	16	586	13	30	22456	3.56	800	3.07	688			373	14.4	47.2	66
NEW MEXICO	37307	20	1865	14	32	21488	3.58	770	3.10	666			331	13.8	41.9	70
OREGON	52925	241	220	13	32	22222	3.84	854	3.15	699			240	14.0	44.3	63
TEXAS	802	1	802	12	66	27538	3.30	910	3.01	830			152	14.7	35.1	73
WASHINGTON	5613	18	312	14	30	23429	3.63	851	3.08	723			216	14.0	44.4	67

BY BREED

AYRSHIRE	156	4	39	14	28	17329	3.92	679	3.28	568			286	14.7	48.3	73
BROWN SWISS	753	16	47	14	29	19088	4.02	768	3.41	651			286	14.6	52.6	72
GUERNSEY	896	13	69	13	37	15931	4.46	711	3.40	550			272	14.6	48.5	66
HOLSTEIN	650035	830	783	14	34	22736	3.61	821	3.10	710	8.89	1958	275	13.9	44.1	68
JERSEY	48007	141	340	15	32	16448	4.61	759	3.64	600	9.30	1288	242	13.2	46.3	65
CROSSBREED/MIXED	10816	45	240	14	29	19641	3.86	758	3.21	631	8.97	1608	335	13.3	45.6	63

BY HERD SIZE

0 - 99	6972	137	51	13	32	18740	4.06	761	3.30	623	9.36	1225	267	14.2	48.2	66
100 - 199	17430	117	149	13	33	19595	3.86	756	3.22	636	8.88	1605	268	14.1	49.3	64
200 - 299	29327	119	246	13	31	20669	3.77	778	3.21	663	8.89	1826	269	14.1	47.8	64
300 - 399	37292	108	345	14	33	20505	3.76	771	3.22	665	8.87	1746	286	13.9	47.0	66
400 - 499	36994	82	451	14	35	21220	3.67	778	3.16	676	8.91	1845	319	14.0	45.4	67
500 - 749	101817	166	613	14	32	22061	3.67	809	3.14	696	8.81	1868	268	14.0	46.5	66
750 - 999	84984	98	867	14	34	22043	3.62	797	3.10	694	8.96	1809	267	13.8	44.2	68
1000 - 1499	139787	114	1226	14	34	22526	3.68	829	3.16	706	8.84	2056	260	13.7	42.8	70
1500 - 1999	93237	55	1695	14	36	23141	3.65	845	3.12	727	9.02	1958	284	13.9	43.4	67
GREATER THAN 2000	162851	54	3016	14	33	23081	3.62	835	3.09	713	8.90	2085	275	13.7	42.6	68

BY MILK PRODUCTION

10000 - 14999	12855	57	226	16	33	13557	4.43	600	3.59	487	8.91	1206	346	13.9	49.7	70
15000 - 15999	13461	43	313	16	32	15544	4.37	680	3.57	555	8.99	1376	281	13.2	48.5	64
16000 - 16999	16767	53	316	15	30	16541	4.22	697	3.49	577	9.11	1529	294	13.8	49.0	67
17000 - 17999	17160	49	350	15	30	17554	4.10	720	3.37	592	8.89	1562	316	13.8	47.7	71
18000 - 18999	41528	69	602	15	34	18473	3.78	699	3.26	603	9.03	1657	352	13.9	45.6	71

MMM

19000 - 19999	39008	82	476	14	30	19480	3.76	733	3.25	633	8.98	1751	281	13.9	46.2	69
20000 - 20999	80929	108	749	15	32	20578	3.61	743	3.13	644	8.92	1839	287	13.9	45.3	69
21000 - 21999	104889	143	733	14	33	21544	3.61	778	3.13	676	8.95	1918	295	13.9	44.3	69
22000 - 22999	101073	126	802	14	33	22480	3.62	814	3.10	696	8.87	2000	262	13.8	44.5	68
23000 - 23999	78104	96	814	13	33	23509	3.61	850	3.09	725	8.84	2086	273	13.9	42.6	66
24000 - 24999	79202	80	990	13	34	24465	3.60	882	3.11	762	8.94	2164	242	13.8	42.6	66
25000 - 25999	54816	66	831	13	35	25417	3.66	930	3.09	784	8.85	2258	239	14.0	43.3	65
26000 - 26999	24618	32	769	13	38	26352	3.61	950	3.07	809	8.64	2250	217	13.8	42.3	64
27000 - 27999	24179	25	967	13	38	27346	3.54	969	3.06	837	8.56	2335	221	14.1	42.3	66
MORE THAN 28,000	22101	21	1052	11	36	29381	3.54	1040	3.00	883	8.65	2534	246	13.8	41.6	63
CALIFORNIA DHIA AVE	710691	1050	677	14	33	22250	3.66	815	3.14	699	8.89	1955	274	13.9	44.3	67

SUMMARY INCLUDES HERDS ON ALL TESTING PLANS PROCESSED BY A DAIRY RECORDS PROCESSING CENTER (DRPC).
 MEMBER HERD RECORDS NOT PROCESSED BY A DRPC ARE NOT INCLUDED IN THE SUMMARY.
 SUMMARY MAY INCLUDE HERDS MILKING MORE THAN TWO TIMES A DAY
 PROTEIN AND SNF AVERAGES MAY NOT INCLUDE ALL HERDS.



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California DHIA 2003 Annual Summary for Cows

	TOTAL COWS	TOTAL HERDS	COWS/HERD	% DRY	% LEFT	MILK POUNDS	FAT %	FAT LBS	PRO %	PRO LBS	SNF %	SNF LBS	RHA SCC	CALV INT	AGE@ CALV	DAYS DRY	PEAK MILK	DAYS OPEN
BY ASSOCIATION																		
ARCATA	724	4	181	19	21	14364	4.19	602	3.77	525	8.89	1461	364	14.5	56.3	75	70.5	159
CENTRAL OREGON	206	2	103	11	55	26397	3.53	931	3.09	816			155	14.4	46.8	61	101.1	143
CHURCHILL	9659	17	568	14	32	22032	3.60	792	3.11	686			426	14.2	46.8	66	98.8	151
DEL NORTE	4009	5	802	11	26	17568	3.75	658	3.28	577			300	13.5	41.9	58	74.3	150
EASTERN NEW MEXICO	35875	18	1993	13	29	23516	3.54	831	3.08	724			261	13.8	42.5	66	98.5	148
FRESNO	84595	95	890	13	36	23408	3.53	826	3.10	748	8.82	1902	273	13.8	42.6	67	98.5	142
JEFFERSON	1447	7	207	13	37	20159	3.65	737	3.14	633			231	13.9	42.5	62	83.7	125
KINGS	93820	88	1066	14	37	22681	3.67	832	3.11	720	8.89	1898	263	13.8	42.9	68	92.0	135
MARICOPA	18048	15	1203	11	31	22375	3.54	791	3.08	688			341	13.5	47.0	58	92.9	144
MERCED	118964	185	643	14	34	21692	3.80	824	3.21	698	8.96	1872	266	13.8	43.6	65	91.1	142
NORTH BAY	32495	88	369	15	36	22132	3.69	816	3.24	716	9.01	1972	282	13.9	49.6	67	96.6	145
SOUTHERN COUNTIES	125537	91	1380	14	35	21513	3.59	772	3.11	666	8.74	1962	317	13.8	43.0	70	89.5	140
STANISLAUS	98355	137	718	13	34	22918	3.67	841	3.06	691	8.73	2138	251	13.9	43.3	65	96.8	141
SW OREGON	1075	12	90	12	26	16488	4.08	672	3.46	571			417	14.4	53.5	61	69.3	161
TILLAMOOK	19323	114	169	13	33	20274	4.03	816	3.20	648			193	13.8	44.7	62	86.8	143
WILLIAMETTE	34614	117	296	12	36	23239	3.74	869	3.10	721			247	14.2	22.6	64	95.7	156

MMM

OTHER	17828	18	990	14	35	19847	3.65	724	3.16	651	8.97	1643	310	13.8	43.8	65	85.6	141
BY STATE																		
ARIZONA	15765	7	2252	11	29	23026	3.48	801	3.04	700			351	13.6	46.1	58	95.2	148
CALIFORNIA	578610	719	805	14	35	22188	3.66	812	3.14	697	8.82	1946	277	13.8	43.6	67	92.9	141
NEVADA	9659	17	568	14	32	22032	3.60	792	3.11	686			426	14.2	46.8	66	98.8	151
NEW MEXICO	33063	17	1945	13	29	23309	3.52	820	3.08	718			265	13.8	42.7	66	97.9	147
OREGON	51618	235	220	13	35	21970	3.85	845	3.14	690			234	14.0	43.5	63	91.4	151
TEXAS	2812	1	2812	11	32	25942	3.69	958	3.04	788			206	13.3	40.0	65	106.0	159
WASHINGTON	5046	17	297	14	33	22671	3.67	833	3.10	702			206	14.1	43.7	67	96.2	149
BY BREED																		
AYRSHIRE	164	4	41	14	30	16581	3.86	641	3.23	536			266	15.5	48.0	82	72.6	154
BROWN SWISS	703	16	44	14	30	18845	4.01	756	3.39	639			322	14.6	52.0	73	80.2	147
GUERNSEY	922	14	66	13	33	16160	4.44	718	3.37	549	9.21	1321	269	15.0	48.6	70	70.5	169
HOLSTEIN	632340	787	803	14	35	22757	3.60	820	3.09	707	8.82	1948	279	13.9	43.5	66	95.3	144
JERSEY	49150	144	341	15	32	16745	4.61	772	3.60	604	9.36	1481	245	13.2	45.5	65	70.1	123
CROSSBREED/MIXED	13293	48	277	14	33	19693	3.85	759	3.20	632	8.84	1503	288	13.7	41.5	65	84.5	144
BY HERD SIZE																		
0 - 99	6865	135	51	13	35	18415	4.09	754	3.31	612	9.67	1401	268	14.3	47.1	66	78.0	151
100 - 199	18470	123	150	13	34	19669	3.85	758	3.22	637	8.75	1588	269	14.1	47.3	64	82.9	147
200 - 299	30137	120	251	13	35	20474	3.81	781	3.21	657	8.92	1827	260	14.0	47.0	63	87.2	150
300 - 399	30690	88	349	14	33	20495	3.77	773	3.21	660	8.89	1710	270	13.9	47.6	64	89.2	143
400 - 499	35483	79	449	14	37	20660	3.69	761	3.18	657	8.88	1830	304	14.1	45.4	66	90.9	152
500 - 749	96757	158	612	13	34	22012	3.67	807	3.15	694	8.75	1868	280	14.0	45.7	65	94.2	149
750 - 999	81086	93	872	14	35	22183	3.64	807	3.11	695	8.83	1852	269	13.8	43.4	67	93.9	142
1000 - 1499	126436	103	1228	14	35	22546	3.65	824	3.13	705	8.76	2019	285	13.8	43.0	59	93.8	139
1500 - 1999	95370	56	1703	14	35	22803	3.66	834	3.11	711	8.85	1941	270	13.7	41.7	67	93.7	138
GREATER THAN 2000	175281	58	3022	13	34	23296	3.60	840	3.08	719	8.84	2053	276	13.7	41.9	66	95.7	139
BY MILK PRODUCTION																		
10000 - 14999	13750	67	205	17	32	13630	4.33	590	3.51	476	9.07	1318	327	13.8	50.3	67	64.6	147
15000 - 15999	14627	44	332	16	34	15535	4.22	655	3.48	542	8.86	1348	327	14.1	45.3	69	71.4	134
16000 - 16999	13709	54	254	15	27	16353	4.21	688	3.49	570	9.00	1479	262	13.6	47.6	65	72.8	140

MMM

17000 - 17999	18956	46	412	15	32	17419	4.14	721	3.39	590	8.84	1503	284	13.4	45.7	67	75.2	132
18000 - 18999	30506	65	469	15	31	18586	3.96	736	3.32	616	8.93	1663	280	13.9	47.2	68	80.2	136
19000 - 19999	40421	77	525	14	36	19599	3.76	737	3.21	628	8.75	1723	320	13.7	44.7	69	84.3	142
20000 - 20999	83281	116	718	14	35	20553	3.62	744	3.13	664	8.94	1836	309	13.9	44.5	70	88.6	143
21000 - 21999	102846	125	823	13	34	21502	3.60	775	3.12	671	8.79	1894	280	13.8	43.0	65	90.6	141
22000 - 22999	91723	112	819	14	34	22452	3.59	805	3.07	688	8.76	1981	270	13.7	43.8	67	94.4	141
23000 - 23999	93093	105	887	13	36	23439	3.62	849	3.10	727	8.81	2067	279	13.9	42.5	65	96.9	145
24000 - 24999	74068	79	938	13	35	24496	3.61	883	3.10	759	8.89	2145	261	13.9	42.4	66	101.1	145
25000 - 25999	35846	48	747	12	37	25551	3.67	937	3.07	784	8.80	2270	238	13.8	42.8	63	103.2	143
26000 - 26999	50327	38	1324	13	33	26418	3.55	939	3.06	808	8.80	2350	245	13.7	41.5	63	106.5	140
27000 - 27999	15224	17	896	12	36	27370	3.59	982	3.04	832		209	14.3	41.7	65	108.7	157	
MORE THAN 28,000	18196	20	910	12	40	29505	3.54	1045	3.02	890	8.58	2545	232	13.7	40.9	62	118.5	143
CALIFORNIA DHIA AVE	696573	1013	688	14	35	22261	3.66	815	3.13	697	8.82	1946	277	13.8	43.6	66	93.2	142

SUMMARY INCLUDES HERDS ON ALL TESTING PLANS PROCESSED BY A DAIRY RECORDS PROCESSING CENTER (DRPC).
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CALIFORNIA DHIA PROGRAM

2004 COW SUMMARY

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	TOTAL COWS	# OF HERDS	COWS/ HERD	% DRY	% LEFT HERD	RHA MILK POUNDS	RHA % FAT	RHA # FAT	RHA % PROTEIN	RHA # PROTEIN	RHA % SNF	RHA # SNF	RHA SCC	CALV INT
BY ASSOCIATION														
ARCATA	791	5	158	14	23	16592	4.09	678	3.60	529	9.00	1691	411	13.5
CENTRAL COUNTIES	222317	314	708	14	31	22358	3.75	838	3.18	705	8.79	2139	243	13.9
CENTRAL OREGON	207	2	103	10	37	25457	3.62	921	3.14	800			188	14.4
CHURCHILL	9728	16	608	13	29	23272	3.63	844	3.17	714			359	14.1
DEL NORTE	4282	6	714	12	35	17195	3.82	656	3.32	570			296	13.8
EASTERN NEW MEXICO	41390	21	1971	12	32	22829	3.54	808	3.10	707			258	13.9
FRESNO	86228	87	991	13	36	23938	3.65	873	3.12	767	8.73	1891	254	13.9
JEFFERSON	1273	6	212	13	34	20125	3.55	715	3.13	631			190	14.0
KINGS	97612	91	1073	14	34	22439	3.70	831	3.13	712	8.90	1911	242	13.8
MARICOPA	21840	16	1365	11	27	22315	3.49	780	3.02	675			301	13.8
NORTH BAY	32061	83	386	14	31	22610	3.73	843	3.25	729	9.08	2147	240	14.0
SOUTHERN COUNTIES	129575	90	1440	14	32	21663	3.60	779	3.11	673	8.71	1964	306	13.9
SW OREGON	1100	10	110	12	25	16155	4.08	659	3.35	541			420	14.8
TILLAMOOK	20318	111	183	13	31	19831	4.03	798	3.25	645			166	13.9
WILLAMETTE	34484	113	305	12	33	22548	3.74	843	3.14	707			239	14.3
BY STATE														
ARIZONA	19543	8	2443	11	28	22802	3.43	783	2.99	682			308	13.8
CALIFORNIA	575162	684	841	14	33	22403	3.69	827	3.15	705	8.80	1976	259	13.9
NEVADA	9728	16	608	13	29	23272	3.63	844	3.17	714			359	14.1

MMM

NEW MEXICO	38353	20	1918	13	32	22601	3.54	799	3.10	700			260	13.9
OREGON	52084	225	231	13	32	21313	3.85	821	3.18	678			217	14.2
TEXAS	3037	1	3037	12	33	25707	3.59	924	3.09	794			227	14.1
WASHINGTON	5299	17	312	13	32	22480	3.64	818	3.12	701			201	14.2

BY BREED

AYRSHIRE	153	4	38	11	27	16312	3.96	645	3.41	557			266	14.4
BROWN SWISS	510	12	42	14	33	18092	3.97	717	3.42	618			278	15.2
GUERNSEY	830	13	64	12	35	16999	4.45	757	3.41	586	9.38	1415	215	15.2
HOLSTEIN	633230	747	848	13	33	22932	3.62	831	3.11	714	8.80	1979	262	14.0
JERSEY	54465	141	386	14	26	16738	4.57	765	3.61	604	9.55	1631	216	13.3
MILKING SHORTHORN	44	2	22	26	20	14998	3.16	474	3.09	464			195	11.6
CROSSBRED/MIXED	13973	52	269	15	31	19462	3.88	754	3.24	632	8.99	1468	250	13.5

BY HERD SIZE

0 - 99	6305	120	53	13	31	18218	4.07	741	3.32	606	9.38	1415	243	14.1
100 - 199	16865	115	147	12	29	19595	3.90	765	3.21	642	9.03	1603	246	14.1
200 - 299	28343	113	251	13	29	20141	3.83	771	3.24	653	8.75	1728	241	14.1
300 - 399	31945	91	351	13	30	20666	3.83	792	3.23	669	8.90	1796	258	13.9
400 - 499	32774	72	455	14	31	21100	3.73	787	3.19	678	8.90	1826	255	14.4
500 - 749	95810	156	614	13	32	21952	3.72	817	3.18	694	8.77	1997	262	14.0
750 - 999	79282	90	881	14	33	22074	3.67	811	3.13	695	8.87	1859	269	13.9
1000 - 1499	126918	103	1232	14	35	22677	3.68	835	3.15	709	8.74	2047	268	13.8
1500 - 1999	77296	45	1718	13	32	23195	3.67	852	3.11	727	8.75	1885	236	13.9
2000 - 2999	90216	38	2374	14	31	22633	3.61	816	3.14	704	8.79	1967	248	13.8
GREATER THAN 3000	117453	28	4195	13	33	23817	3.62	861	3.09	734	8.88	2238	267	13.8

BY MILK PRODUCTION

LESS THAN 12,000	1532	10	153	16	19	10349	4.41	456	3.47	359			289	14.2
12000 - 12999	2421	11	220	20	34	12581	4.18	526	3.40	427	8.76	1126	303	13.5
13000 - 13999	3738	17	220	17	28	13535	4.28	579	3.56	483	9.17	1238	415	15.8
14000 - 14999	5370	21	256	16	25	14473	4.39	635	3.48	504			307	13.6

MMM

15000 - 15999	13002	41	317	15	23	15534	4.31	670	3.49	542	8.95	1380	229	13.7
16000 - 16999	22265	57	391	14	28	16465	4.28	704	3.51	578	9.04	1468	253	13.5
17000 - 17999	13387	50	268	15	30	17578	4.16	731	3.45	616	9.04	1588	280	13.9
18000 - 18999	28206	55	513	15	27	18498	4.11	760	3.38	625	8.84	1636	265	13.7
19000 - 19999	37420	73	513	14	33	19553	3.72	728	3.19	624	8.80	1726	303	14.1
20000 - 20999	88401	112	789	15	32	20573	3.65	751	3.14	646	8.79	1795	290	14.0
21000 - 21999	82957	108	768	14	30	21545	3.64	784	3.14	677	8.81	1883	246	14.0
22000 - 22999	87299	100	873	13	34	22453	3.61	810	3.12	700	8.85	1988	270	13.9
23000 - 23999	99267	100	993	13	32	23474	3.62	849	3.10	727	8.78	2071	267	13.9
24000 - 24999	79713	85	938	13	33	24421	3.66	893	3.11	759	8.81	2146	240	13.9
25000 - 25999	69331	63	1100	13	34	25530	3.60	919	3.09	789	8.96	2298	229	14.0
26000 - 26999	31607	35	903	12	36	26495	3.66	969	3.09	818	8.82	2338	211	13.8
27000 - 27999	22061	16	1379	12	36	27360	3.55	971	3.06	838			231	13.8
MORE THAN 28,000	15184	16	949	12	36	29294	3.58	1047	3.08	889	8.62	2594	212	13.8
CALIFORNIA DHIA AVE.	703205	971	724	13	32	22371	3.68	824	3.15	707	8.80	1976	258	13.9

SUMMARY INCLUDES HERDS ON ALL TYPES OF TESTING PROGRAMS (OFFICIAL AND UNOFFICIAL)
AND INCLUDES BOTH OFFICIAL AND UNOFFICIAL HERD AVERAGES.
PROTEIN AND SNF AVERAGES MAY NOT INCLUDE ALL HERDS.



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MMM



2005 Annual Production Summary - All Herds

CALIFORNIA DHIA PROGRAM

ALL HERD AVERAGES

YEAR ENDING 12/05

ALL TYPES OF TESTS - COWS

	TOTAL COWS	# OF HERDS	COWS/ HERD	% DRY	% LEFT HERD	RHA MILK POUNDS	RHA % FAT	RHA # FAT	RHA % PROTEIN	RHA # PROTEIN	RHA % SNF	RHA # SNF	RHA SCC	CALV INT	AGE @ CALV (MO)	DAYS DRY	PEAK MILK	DAYS OPEN
BY ASSOCIATION																		
ARCATA	845	5	169	14	19	15805	4.15	655	3.58	482			362	13.9	53.6	73	73.4	135
CENTRAL COUNTIES	226378	308	735	13	33	22726	3.76	854	3.18	718	8.83	2234	249	13.7	43.4	63	95.6	140
CENTRAL OREGON	139	1	139	12	72	26264	3.64	955	3.10	814			173	13.9	51.4	61	102.9	120
CHURCHILL	10308	17	606	13	32	23641	3.54	838	3.16	720			337	14.0	47.1	60	103.1	149
DEL NORTE	4477	6	746	13	38	16956	3.76	638	3.28	555			282	13.6	44.4	63	73.8	124
EASTERN NEW MEXICO	49880	26	1918	12	30	23378	3.55	830	3.09	723			256	13.8	42.4	64	96.8	141
FRESNO	89677	86	1043	13	36	23923	3.66	876	3.14	775	8.68	1849	273	13.8	41.4	65	100.7	145
JEFFERSON	1345	6	224	14	31	20451	3.62	740	3.14	641			270	14.2	42.6	66	84.3	134
KINGS	102043	93	1097	13	35	22774	3.66	834	3.10	711	8.91	1988	271	13.7	42.4	65	92.8	133
MARICOPA	21932	17	1290	12	32	21753	3.41	743	3.05	664	9.33	1596	289	13.7	46.5	58	94.2	145
NORTH BAY	30208	79	382	14	33	22632	3.72	841	3.18	716	8.94	2131	233	14.0	48.6	66	97.6	143
SOUTHERN COUNTIES	123801	75	1651	14	33	22030	3.59	791	3.10	683	8.82	2007	327	13.8	42.7	68	92.1	141
SW OREGON	1243	11	113	12	24	15389	4.14	637	3.37	519			393	14.9	51.4	60	66.7	168
TILLAMOOK	20554	112	184	14	32	19442	4.09	795	3.25	633			167	13.8	45.4	63	83.8	140
WILLAMETTE	30994	106	292	12	35	23231	3.77	875	3.12	726			224	14.2	43.4	60	95.1	147
BY STATE																		
ARIZONA	19247	8	2406	11	33	22410	3.33	747	3.01	675			297	13.8	45.9	58	97.4	149
CALIFORNIA	580115	661	878	13	34	22685	3.69	837	3.15	714	8.83	2007	272	13.7	43.1	65	95.0	140
COLORADO	1243	3	414	12	21	24076	3.50	842	3.08	742			225	13.9	40.9	66	94.2	154
NEVADA	10308	17	606	13	32	23641	3.54	838	3.16	720			337	14.0	47.1	60	103.1	149
NEW MEXICO	39702	18	2206	13	30	23332	3.54	827	3.09	722			242	13.8	43.3	64	97.7	140
OREGON	50545	222	228	13	34	21545	3.89	839	3.18	684			210	14.1	44.4	61	89.9	144
TEXAS	8936	5	1787	11	29	23485	3.58	841	3.09	725			320	13.8	38.2	65	93.3	145
WASHINGTON	3729	14	266	13	33	21700	3.67	796	3.12	677			176	14.1	44.4	64	90.0	149
BY BREED																		
AYRSHIRE	35	3	12	12	24	14332	3.93	563	3.20	459			340	15.4	50.6	71	66.8	151
BROWN SWISS	538	14	38	13	26	18323	3.91	717	3.40	623			234	14.8	50.7	70	75.2	149
DUTCH BELTED	120	1	120	15	15	16590	3.72	617	3.27	543			272	13.6	51.6	78	75.4	137
GUERNSEY	803	13	62	13	39	16820	4.46	750	3.38	576	9.31	1384	245	15.1	49.0	66	73.6	172
HOLSTEIN	639329	720	888	13	34	23242	3.62	840	3.11	723	8.82	2014	273	13.8	43.1	64	97.2	142
JERSEY	57749	140	412	14	31	17178	4.58	786	3.58	615	9.41	1550	212	13.1	45.0	62	72.8	121
MILKING SHORTHORN	23	1	23	29	29	17026	3.11	530	3.11	530			150	14.1	70.3	113	90.4	123
CROSSBRED/MIXED	15227	56	272	14	31	19286	3.95	761	3.26	630	8.84	1441	280	13.7	44.4	64	85.2	146
BY HERD SIZE																		
0 - 99	6240	117	53	13	32	18031	4.14	746	3.34	603	9.31	1384	215	14.4	47.9	64	77.7	153
100 - 199	16454	111	148	13	39	18908	3.95	746	3.27	619	8.97	1455	258	14.0	47.0	62	80.5	146
200 - 299	26245	104	252	13	32	20368	3.81	776	3.22	659	8.84	1635	227	14.1	46.9	63	86.9	151
300 - 399	31954	90	355	13	31	20484	3.82	783	3.22	666	8.86	1653	283	13.8	46.9	63	88.0	145
400 - 499	31965	71	450	13	34	21282	3.75	797	3.17	669	8.82	1932	259	14.1	45.7	65	92.9	145
500 - 749	94262	155	608	13	33	22165	3.74	828	3.17	702	8.79	1944	263	14.0	45.1	63	94.6	149
750 - 999	75179	86	874	13	33	22285	3.66	815	3.12	700	8.76	1853	297	13.8	44.2	66	94.8	142
1000 - 1499	118782	97	1225	14	34	23007	3.71	853	3.16	723	8.82	2093	287	13.7	42.4	65	96.2	137
1500 - 1999	73213	43	1703	13	33	23952	3.64	873	3.12	746	8.87	2145	284	13.7	42.4	64	97.9	140
2000 - 2999	100388	42	2390	13	32	23059	3.60	831	3.11	718	8.72	1849	248	13.6	41.7	64	96.0	134
GREATER THAN 3000	139142	32	4348	13	35	23803	3.61	860	3.11	735	8.99	2325	255	13.6	41.1	64	97.7	137
BY MILK PRODUCTION																		
LESS THAN 12,000	1407	10	141	17	25	11005	4.67	514	3.60	396			335	13.3	49.9	66	54.2	143
12000 - 12999	1955	11	178	19	31	12577	4.38	551	3.49	438			272	13.8	58.4	70	60.6	130
13000 - 13999	2105	11	192	17	34	13608	4.09	557	3.38	460			363	13.7	54.4	70	65.9	153
14000 - 14999	5102	23	222	16	33	14515	4.38	635	3.50	510	8.95	1272	335	14.6	47.6	71	66.4	133
15000 - 15999	18656	55	339	15	36	15556	4.32	673	3.49	543	9.37	1474	269	13.7	48.6	64	69.9	133
16000 - 16999	14594	51	286	15	30	16487	4.11	678	3.38	558	9.19	1521	277	13.8	47.2	66	75.4	146
17000 - 17999	15330	50	307	14	30	17494	4.27	747	3.42	598	9.09	1590	245	13.6	48.4	59	78.1	140
18000 - 18999	36656	64	573	15	33	18513	3.99	739	3.32	613	8.82	1639	323	13.7	44.9	67	81.5	139
19000 - 19999	36634	70	523	14	33	19532	3.87	757	3.27	638	8.75	1722	307	13.8	44.3	67	83.6	138
20000 - 20999	51737	87	595	13	33	20597	3.65	753	3.17	653	8.85	1815	310	13.9	44.2	66	88.1	146
21000 - 21999	88966	95	936	14	32	21494	3.60	775	3.12	671	8.77	1873	280	13.8	43.0	67	92.0	139
22000 - 22999	110612	111	997	13	33	22540	3.60	813	3.11	700	8.80	1996	278	13.8	42.9	64	95.0	143
23000 - 23999	74511	78	955	13	33	23566	3.63	856	3.11	733	8.80	2071	273	13.9	43.8	64	98.4	145
24000 - 24999	86297	87	992	13	35	24476	3.62	887	3.11	761	8.85	2158	250	13.7	41.8	63	100.6	137
25000 - 25999	77466	63	1230	13	34	25571	3.61	924	3.07	786	8.95	2278	216	13.7	41.5	63	103.1	136
26000 - 26999	48981	42	1166	12	37	26399	3.59	948	3.10	817	8.89	2312	240	13.7	40.9	62	106.5	143
27000 - 27999	16854	18	936	12	33	27410	3.64	999	3.09	846			240	14.1	42.9	64	110.7	148
MORE THAN 28,000	25955	22	1180	12	34	29273	3.63	1063	3.06	894	8.84	2596	217	13.7	41.2	59	118.7	142
CALIFORNIA DHIA AVE.	713824	948	753	13	33	22654	3.68	834	3.14	711	8.83	2007	268	13.8	43.3	64	94.9	141

SUMMARY INCLUDES HERDS ON ALL TYPES OF TESTING PLANS PROCESSED BY A DAIRY RECORDS PROCESSING CENTER (DRPC).
 MEMBER HERD RECORDS NOT PROCESSED BY A DRPC ARE NOT INCLUDED IN THE SUMMARY.
 SUMMARY MAY INCLUDE HERDS MILKINGS MORE THAN TWO TIMES A DAY.
 PROTEIN AND SNF AVERAGES MAY NOT INCLUDE ALL HERDS.

MMM

California Milk Pricing Formulas

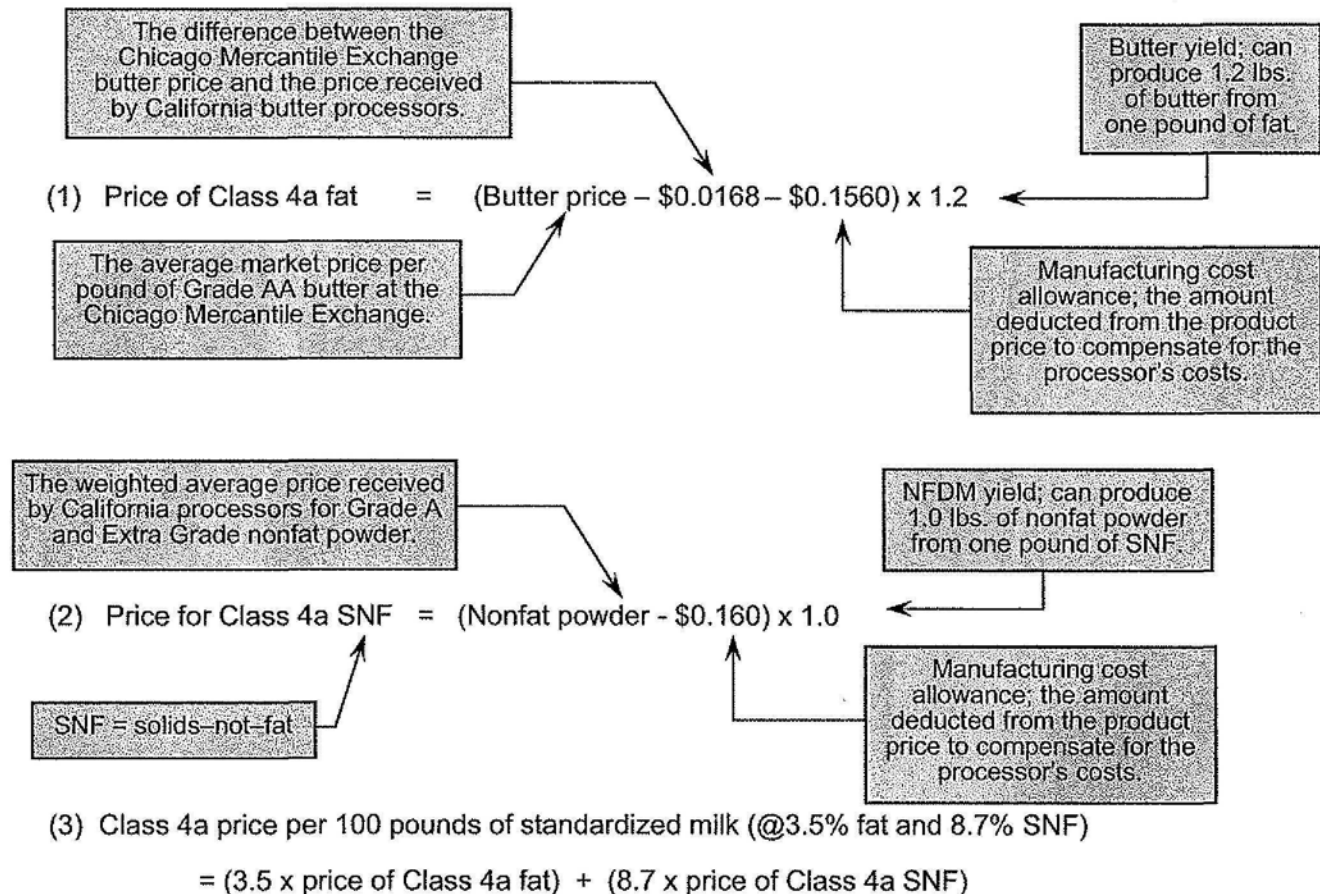
California's milk marketing program establishes minimum prices that processors must pay for Grade A milk received from dairy farmers. For the purposes of setting prices, there are five classes of milk that are established depending on the type of dairy product. In California's milk pricing system, commercial market prices for dairy product commodities are the most significant factor in determining the minimum price that processors must pay for milk.

Milk consists of three basic components: butterfat (fat), solids-not-fat (SNF), and fluid carrier (water). Prices are assigned to all three components in the determination of the Class 1 milk price. Only the fat and SNF components are used to set the Class 2, 3, 4a, and 4b milk prices. Because prices are determined for individual milk components, a simple calculation must be performed to obtain the implied hundredweight price. Class 1, 4a, and 4b prices are adjusted monthly, and Class 2 and 3 prices are adjusted bimonthly.

The Five Classes of Milk

- Class 1: Milk used in fluid products, including whole, reduced fat, lowfat, and nonfat milks.*
- Class 2: Milk used in heavy cream, cottage cheese, yogurt, and condensed products.*
- Class 3: Milk used in ice cream and other frozen products.*
- Class 4a: Milk used in butter and dry milk products, such as nonfat dry milk.*
- Class 4b: Milk used in cheese, other than cottage cheese.*

Class 4a Price Formula (butter and dry milk products)

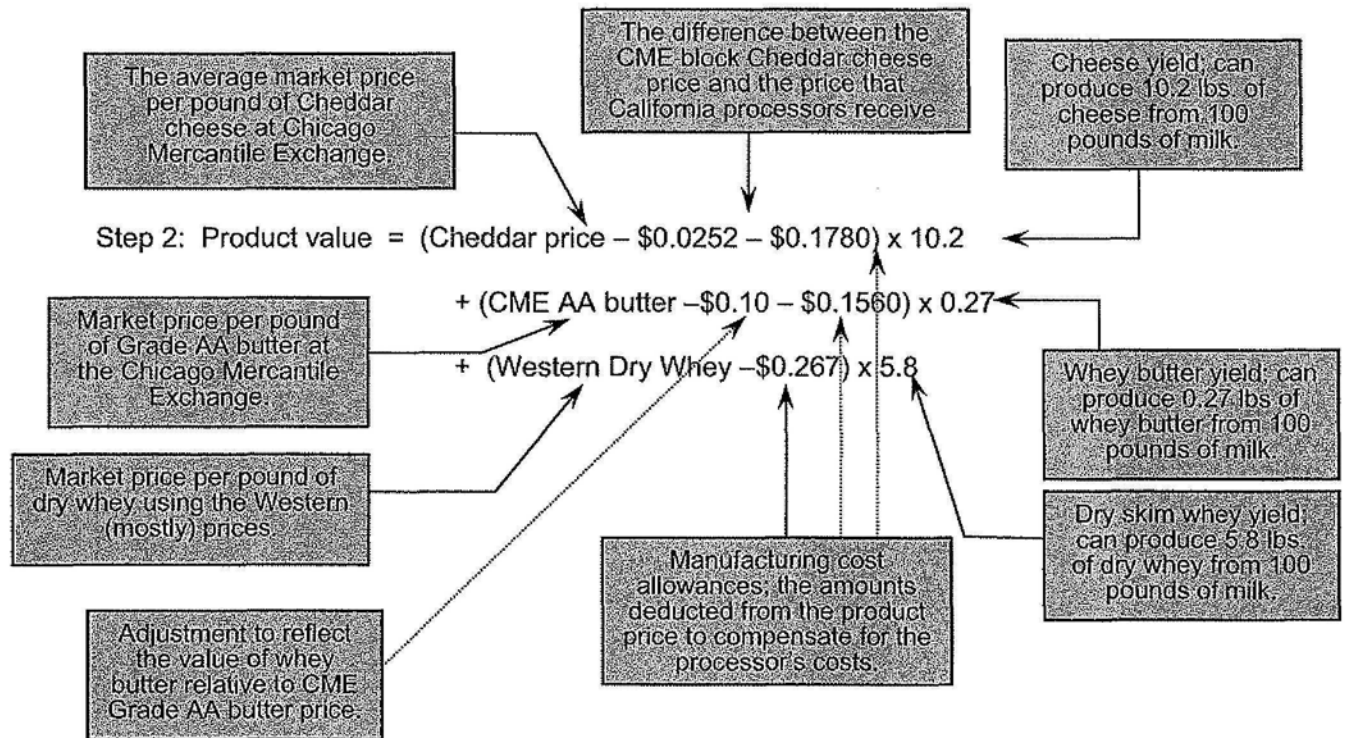


For any month in which the Secretary implements the collection of charges for the Milk Producers Security Trust Fund, the minimum Class 4a price shall be increased by:
\$0.0032 per pound of fat, and \$0.0013 per pound of SNF

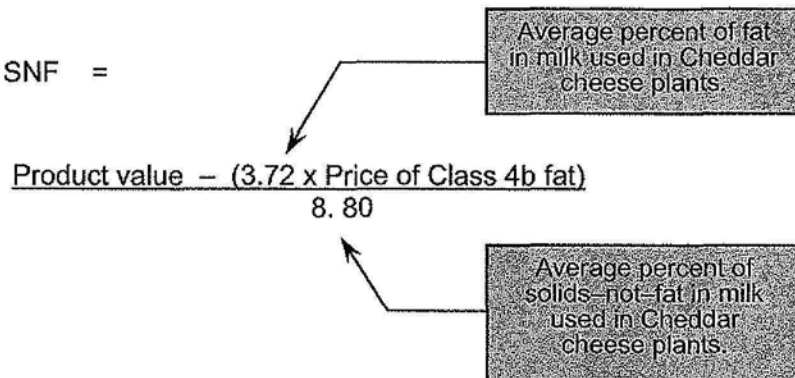
Class 4b Price Formula (cheese)

The Class 4b price calculation consists of four steps. The first step sets the fat component price in 4b milk to that of 4a milk. The second step determines the product value of cheese and Grade B butter per hundred pounds of milk. The third step identifies the 4b SNF price. The fourth step converts the component prices to a standardized milk price.

Step 1: Price of Class 4a fat = Price of Class 4b fat



Step 3: Price of Class 4b SNF =



Step 4: Class 4b price per 100 pounds of standardized milk (@3.5% fat and 8.7% SNF)

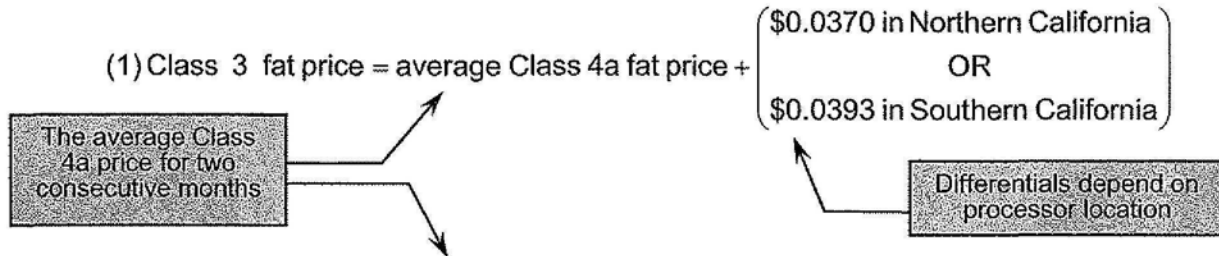
$$= (3.5 \times \text{price of Class 4b fat}) + (8.7 \times \text{price of Class 4b SNF})$$

For any month in which the Secretary implements the collection of charges for the Milk Producers Security Trust Fund, the minimum Class 4b price shall be increased by:
\$0.0032 per pound of fat, and \$0.0013 per pound of SNF

NNN

Class 3 Price Formula (frozen dairy products)

Class 3 prices are established on a bi-monthly basis prior to the beginning of each even month. For example, the February–March pricing period for Class 3 milk uses the average Class 4a component prices for December and January.



(2) Class 3 SNF price = average Class 4a SNF price + (\$0.0586 throughout California)

(3) Class 3 price per 100 pounds of standardized milk (@3.5% fat and 8.7% SNF)

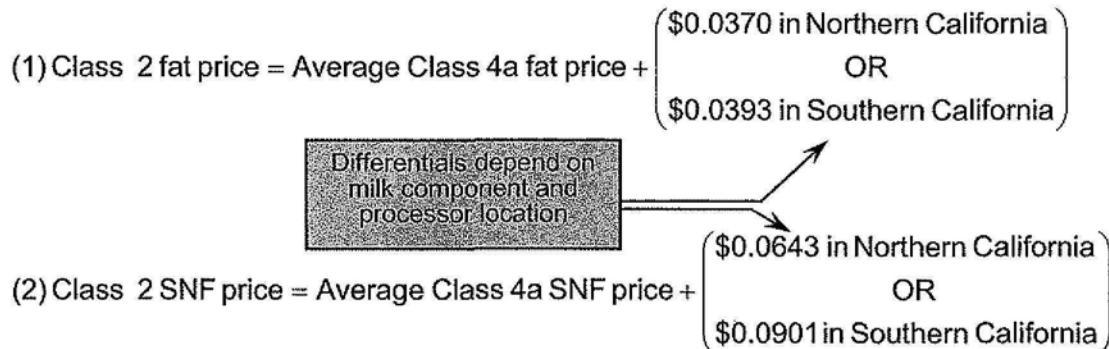
$$= (3.5 \times \text{price of Class 3 fat}) + (8.7 \times \text{price of Class 3 SNF})$$

For any month in which the Secretary implements the collection of charges for the Milk Producers Security Trust Fund, the minimum Class 3 price shall be increased by: \$0.0032 per pound of fat, and \$0.0013 per pound of SNF

Class 2 Price Formula

(sour cream, heavy cream, cottage cheese, and yogurt)

Like the Class 3 prices, Class 2 prices are established on a bi-monthly basis prior to the beginning of each even month. For example, the February–March pricing period for Class 2 milk uses the average Class 4a component prices for December and January.



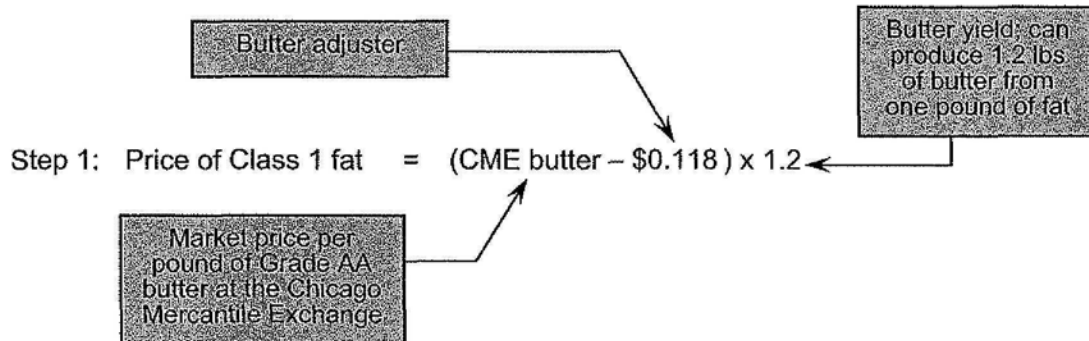
(3) Class 2 price per 100 pounds of standardized milk (@3.5% fat and 8.7% SNF)

$$= (3.5 \times \text{price of Class 2 fat}) + (8.7 \times \text{price of Class 2 SNF})$$

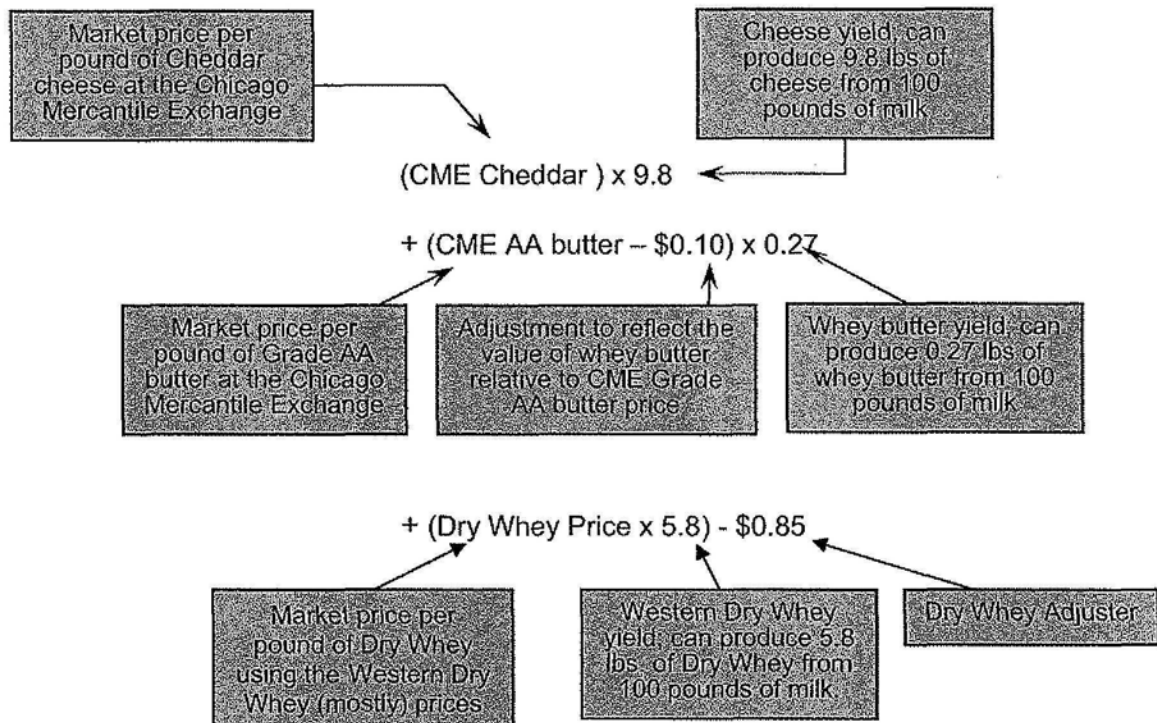
For any month in which the Secretary implements the collection of charges for the Milk Producers Security Trust Fund, the minimum Class 2 price shall be increased by: \$0.0032 per pound of fat, and \$0.0013 per pound of SNF

Class 1 Price Formula for Fluid Milk Products

Determining the price for fluid milk products involves several steps. The Class 1 fat price in the fluid milk pricing formula is set directly and uses the Chicago Mercantile Exchange (CME) butter price with an adjuster. The SNF and carrier prices are calculated as residuals. They rely on a basic price mover called the commodity reference price (CRP) which is based off the higher of the price for CME Cheddar cheese and Mostly Western Dry Whey or the CME Grade AA butter and California weighted average price for nonfat dry milk. The value of the Class 1 fat price is subtracted from the CRP and the remaining residual value is allocated to SNF and carrier. Once the component prices have been assigned to fat, SNF, and fluid carrier portions of milk, these component prices are converted to a standardized hundredweight milk price.

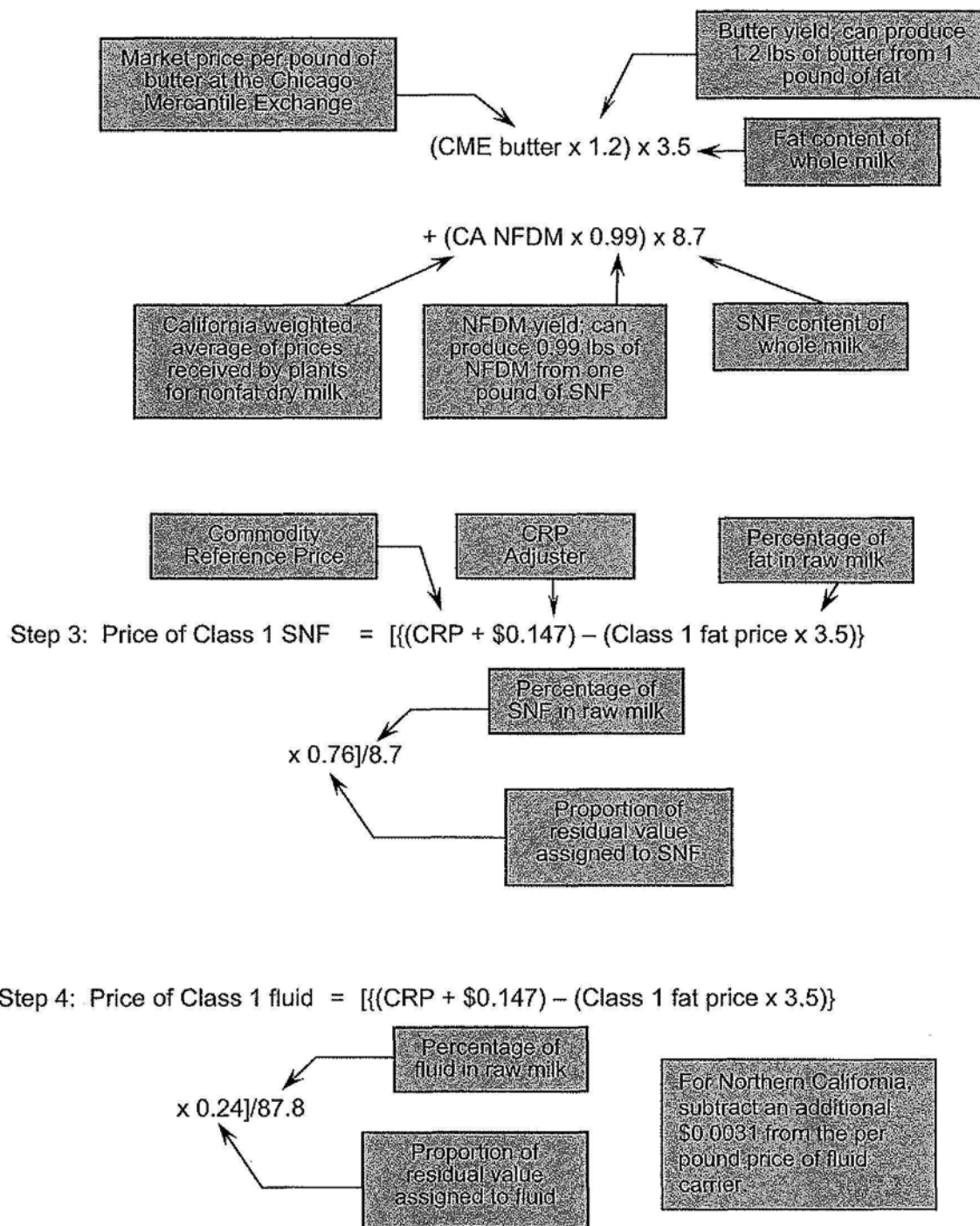


Step 2: Commodity Reference Price = the **higher** of two price calculations:



OR

NNN



For any month in which the Secretary implements the collection of charges for the Milk Producers Security Trust Fund, the minimum Class 1 price shall be increased by:
\$0.0017 per pound of fat, \$0.0009 per pound of SNF, and \$0.0001 per pound of carrier

A Summary of Dairy Product Manufacturing Costs at Cooperative Plants

Testimony at the Federal milk order national hearing on Class III and Class IV milk price manufacturing allowances, in Alexandria, Virginia, starting on January 24, 2006, by K. Charles Ling, Business and Cooperative Programs, Rural Development, United States Department of Agriculture.

My name is Charles Ling. I am an agricultural economist with Cooperative Programs of Rural Development. I have served as its program leader for dairy, livestock, and poultry since 1988. Five years prior to joining Cooperative Programs in 1978, I was an agricultural economist with the Federal Milk Order No. 2 Market Administrator's Office in New York. I received my B.S. degree from National Taiwan University, and master's and Ph.D. from the University of Connecticut, all in agricultural economics. I am testifying for the record at the request of the Agricultural Marketing Service regarding the results of a technical assistance study of the cost of manufacturing dairy products at a number of dairy cooperative plants for 2004.

After publishing "Dairy Product Manufacturing Costs at Cooperative Plants (ACS Research Report No. 34)" in 1983, a group of cooperatives requested the then Agricultural Cooperative Service (ACS) to conduct an annual confidential technical assistance project to help in their cost comparisons. The cooperatives promised to provide data from selected plants to ACS for use in developing a database of cost information from large cooperative milk manufacturing plants. ACS would provide each cooperative with a report comparing a particular cooperative's plant(s) with other similar plants without disclosing individual plant data to others. Participation in the study is voluntary and is open to all dairy cooperatives. The 2004 plant cost study was the 20th year of the technical assistance project.

Cooperative Programs is authorized by the Cooperative Marketing Act of 1926 to conduct technical assistance studies. Section 3(b) of the Act directs it "To make surveys and analyses if deemed advisable of the accounts and business practices of representative cooperative associations upon their request; to report to the association so surveyed to results thereof, and with the consent of the association so surveyed to publish summaries of the results of such surveys, together with similar facts, for the guidance of cooperative associations and for the purpose of assisting cooperative associations in developing methods of business and market analysis." (7 U.S.C. § 453)

For the plant cost comparison technical assistance project, dairy products studied are butter, nonfat dry milk (powder), cheese and, if data are available, whey and other dairy products. Only in-plant costs are included.

The following instructions were given to the cooperatives for reporting cost data on butter-powder plants:

1. Scope of cost information: In-plant costs of moving milk from the receiving deck to the product delivery deck. Exclude milk procurement costs, transportation, administrative costs

(plant office, plant manager, and corporate overhead), interest, and costs associated with facilities for prolonged storage or offsite storage.

2. Milk received at the plant incurs a receiving cost. Cream and skim separated in the plant incur the costs of receiving and separating milk. Condensed skim incurs an additional evaporation cost. If milk, cream, skim, or condensed was shipped out of the plant, please ensure the accompanied receiving, separation, or evaporation, and shipping costs are taken out of the plant manufacturing cost.
3. If cream, skim, or condensed was received at the plant for further processing, allocate a cost to that product as if it had been separated or condensed at the plant. Cost incurred at the receiving bay should be noted also.
4. For direct cost items such as direct labor, electricity, and fuels, please ensure the dollars and physical units reported correspond to each other.

For reporting cost data on cheese plants, these two instructions replace the previous items 2 and 3:

1. If cream, skim, condensed skim or condensed whey, or other intermediate product was received at or shipped out of the plant, please make sure the product is allocated a processing cost. Costs incurred at the receiving bay for receiving/shipping the product also should be noted.
2. Do not include the cost of processing whey and whey products in cheese manufacturing costs.

Nine cooperatives submitted 2004 cost data on 17 cheese plants, 8 butter plants, and 16 powder plants. However, due to data incompatibility, one butter plant and two powder plants were not included in the database for preparing the final reports. A set of nine reports was prepared; each participating cooperative received a report comparing its plant costs with the average of all plants making the same product. These reports, like all technical assistance reports, carry this disclaimer: "This technical assistance report was prepared for the sole use of (name of cooperative). Its board and management may make any use of the report they deem appropriate, but Cooperative Programs will treat it as confidential to the extent provided for by law."

With the consent of the participating cooperatives, the results of the study are summarized and presented in the accompanying table. Simple average plant costs were 14.267 cents per pound of all cheeses, 17.019 cents per pound of 40-pound block cheese, 6.721 cents per pound of condensed whey solids, 11.545 cents per pound of dried whey, 18.137 cents per pound of butter, and 21.417 cents per pound of powder (nonfat dry milk). Using each plant's product volume as the weight, the weighted average costs were 13.295 cents per pound of all cheeses, 15.136 cents per pound of 40-pound block cheese, 6.549 cents per pound of condensed whey solids, 11.409 cents per pound of dried whey, 16.588 cents per pound of butter, and 16.816 cents per pound of powder.

In reviewing these cost data, several factors have to be kept in mind:

1. The cost analysis does not consider differences in product quality. Products of higher quality conceivably would require higher quality ingredients and more effort by labor.
2. The cost allocation procedure for a multiple-product plant may not be uniform among the participating cooperatives. Therefore, two plants having exactly the same operations and same total costs may show different unit product manufacturing costs.
3. The nature of a plant might affect its manufacturing cost. A plant used strictly for manufacturing purposes tends to have a relatively constant milk volume and is operated at a high rate of capacity. It is likely to have a lower cost than a plant for balancing milk supply.
4. There are regional differences in input costs, such as wages, electricity, and fuel rates. It is possible that an efficiently operated plant in one region might have a higher per unit manufacturing cost than a less efficient one in another region.
5. The proportion of butter in bulk and print forms may affect a butter plant's cost.
6. When categorizing various in-plant expenses into cost items for this study, different plants may have grouped them differently. Although this should not affect the total cost, care should be used in reading the individual cost items.

This concludes my statement.

2004 Dairy Product Plant Costs, USDA Rural Development Cooperative Programs Technical Assistance Project

Cost Items	Simple average					
	All Cheeses ¹	40-lbs block cheese ²	Condensed whey (solids)	Dried whey ³	Butter	Nonfat dry milk ^{3,4}
-----Cents per pound of product-----						
Wages and benefits	5.406	6.046	2.363	2.887	6.883	6.798
Electricity ⁵	0.425	0.425	0.394	1.010	0.914	1.207
Fuels ⁵	0.874	0.756	1.636	2.267	0.948	3.821
Water and sewer ⁵	0.374	0.512	0.348	0.889	0.320	0.343
Packaging materials ⁶	1.835	1.944	0.000	0.940	2.769	1.375
Ingredients	1.662	1.752	0.043	0.196	0.194	0.016
Cleaning supplies	0.379	0.294	0.384	0.382	0.370	0.383
Plant and lab supplies	0.481	0.644	0.253	0.619	0.830	0.952
Laundry	0.095	0.021	0.060	0.095	0.042	0.082
Repair and Maintenance	0.785	1.144	0.449	0.672	0.748	1.783
Depreciation	0.793	0.900	0.494	0.835	1.541	2.033
Equipment rentals	0.617	1.673	0.048	0.314	0.260	0.302
Taxes	0.091	0.100	0.043	0.130	0.196	0.463
Insurance	0.118	0.081	0.082	0.172	0.213	0.516
Miscellaneous	0.332	0.728	0.125	0.138	1.909	1.343
Total simple average cost ⁷	14.267	17.019	6.721	11.545	18.137	21.417
Pounds of product per plant	62,265,377	69,057,421	26,528,521	59,518,997	36,302,275	31,359,689
Average cheese yield/cwt milk	10.4	10.7				
Average percent print butter					43.9%	
Number of plants	17	6	8	6	7	14
Total weighted average cost (cents per pound) ⁸	13.295	15.136	6.549	11.409	16.588	16.816

¹Predominantly Cheddar cheese in 40-pound, 640-pound, or 500-pound packages; may contain some other cheeses.

²Predominately Cheddar cheese in 40-pound blocks; may contain some other cheeses.

³Includes both condensing and drying costs.

⁴Predominantly nonfat dry milk; contain small amounts of buttermilk powder, whole milk powder, animal feed and others.

⁵For some plants, fuels represent utilities, which include electricity, fuel and water and sewer.

⁶Cost of packaging materials was likely affected by variations in packages across plants.

⁷Individual cost items may not add to total due to rounding.

⁸Using each plant's product pounds manufactured as the weight.

Estimating Butterfat Recovery on RCBS Report

BF Recovery	95.25%
BF Test	3.69
Casein Percent	82.20%
Protein Amount	3.04
Moisture	38.00%

Cheese Yield	10.3965
Lbs. Cheddar Cheese / 1 Lb BF	1.675
Lbs. Cheddar Cheese / 3.5 Lb BF	6.179
Pounds of Cheese/lb of protein	4.2174
Lbs Cheddar Cheese / 1 Lb BF	1.387
Cheese Yield (Sum)	10.40

Reported Yield	10.40
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2004 Cheese Plant Costs (All Cheeses)

Item	17-plant simple average	Dairy Farmers of America		
		Lovington, NM	Monett, MO	Zumbrota, MN

d of cheese

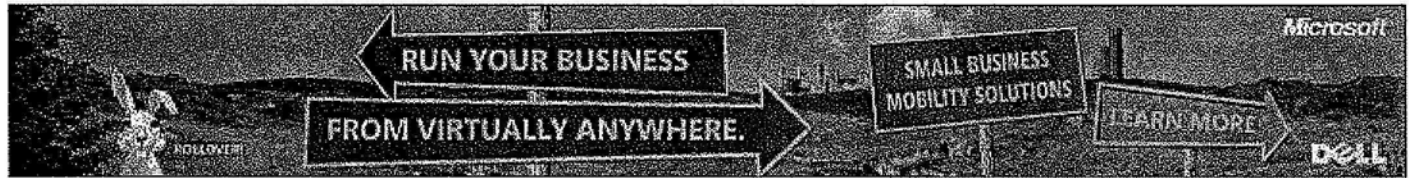
Labor			
Direct labor			
Fringe benefits			
Supervisory/Indirect labor			
Fringe benefits			
Total labor	5.406	5.807	
Electricity*	0.425	0.000	
Fuels*			
Natural gas		1.104	
Fuel oil		0.000	
Propane gas		0.000	
Steam		0.000	
Other fuels		0.000	
Total fuels	0.874	1.104	
Water and sewer*	0.374		
Packaging materials--all	1.835		
Ingredients	1.662		
Cleaning supplies	0.379		
Plant and lab supplies	0.481		
Laundry	0.095		
Repair and Maintenance	0.785		
Depreciation	0.793		
Equipment rentals	0.617		
Taxes	0.091		
Insurance (Included below)	0.118		
Miscellaneous	0.332		
Total cost**	14.267	11.001	
Pounds of cheese made***	62,265,377	61,779,328	
Annual capacity (14 plants)	67,763,240		
Capacity used (14 plants)	93.7%		
Cheese yield/cwt of milk	10.41	10.25	
Butterfat content based on input	35.7%	38.8%	

*For some plants, fuels represent utilities, which include water and sewer.

**Weighted average cost was 13.295cents/pound of milk. Columns do not add due to rounding.

***Mainly Cheddar cheese in 40-pound, 640-pound, may contain some

65



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New cooking vats
make cheese even
better: Scherping
Systems installs
the latest in
cheesemaking
technology at
Cabot Creamery.
(Partners in
Progress).

RRR

(Remodeling and renovation)

Location: United States

After 30 years of service, the old cheese vats at the Cabot Creamery plant in Cabot, Vt., were well past their prime. The vats had been producing some of the world's best cheese -- Cabot's award-winning Vermont cheddar -- but clearly they needed to be replaced with more efficient models.

"The old vats were an open-topped type, and we definitely wanted to go with a closed vat," says Ray Dyke, vice president of technology for Montpelier, Vt.-based Cabot Creamery Cooperative and for the company's parent cooperative, Agri-Mark Inc., based in Lawrence, Mass.

Cabot decided to utilize the closed cheese vats of Winsted, Minn.-based Scherping Systems. Last year four Scherping HCVs% (horizontal cheese vats) were installed at the Cabot cheese plant, which annually produces between 14 and 16 million pounds of aged and specialty cheeses, including flavored natural cheddars, low-fat cheddar and Monterey Jack. The Scherping Systems HCVs represent the latest in cheese-making technology and offer a higher yield per vat, along with a more consistent cheese product.

According to Cabot plant manager Marcel Gravel, the improvement between the old vats and the new Scherping Systems vats was instantly noticeable. "We could see a big difference the day we starting using them," Gravel recalls.

One of the main features of the Scherping vats is the counter rotation system. Rather than just one blade pushing the cheese in a circular motion, the Scherping vats have two knives rotating in opposite directions. The counter rotation keeps the curd well dispersed.

1 2 Next page in article »

RRR

Publication: Dairy Field
Date: Feb 2002
Subject: Dairy equipment
Company: Scherping Systems (Contracts),
Cabot Creamery Cooperative Inc.
(Remodeling and renovation)
Location: United States

"The knives that are in there are razor sharp, so they really do a nice job of cutting," says Gravel. This cleaner cut, Gravel explains, means less butterfat is lost into the whey. "We went from a fat recovery of 90 to 93 with the old vats, and 93 being the absolute best we've ever had," Gravel says. "Now we're running a 95 to 96 fat recovery with these new vats." Trapping more of the butterfat into the cheese, in turn, increases yields. Gravel says their yield has increased by 10 percent.

Along with higher yields, another advantage of the Scherping HVC is that its larger capacity allows Cabot to produce more cheese. "Before we were able to run about 575,000 pounds of milk a day, and with these new vats, we run about 800 [thousand]," Dyke explains. Because the Scherping HVC has automatic cleaning, Cabot has been able to save on sanitation manpower as well, Dyke adds.

Gravel says the increased yield and production means the Scherping vats will have paid for themselves in about a year and half's time. "Cabot's new vats completely impress me," he says.

Dyke says the purchase of the HCVs represents a continuation of Cabot's long-time relationship with Scherping Systems. A few years ago, Scherping provided the process installation and automation for Cabot's whey plant in Middlebury, Vt. "We've done a lot of business with Scherping over the years," Dyke says. "They've been an extremely reliable company to work with."

« Previous page in article 1 2

In addition, make sure to read these articles:

RRR

CPS SCHERPING

Especially for:

Cheddar

Date:

Customer Input:

Daily Milk Usage	1,000,000 Lbs	
Present Predraw Whey Fat	0.230%	
Expected Predraw Whey Fat	0.190%	
Cheese Yield	10.30%	
Cheese Moisture	38.0%	
Fat Content In The Milk	3.67%	
Protein Content In Milk	3.20%	
Casein In The Milk	2.50%	0.88 C/F
Casein Recovery	94.00%	
Price Of Whey Fat	\$1.20 Per Lb	
Price Of Cheese	\$1.35 Per Lb	
Type Of Cheese	Cheddar	
Cheese Type Constant	1.10	

Scherping's Results:

Expected

Present

Variance

Percentage Of Fat Recovery	95.36%		
Daily Whey Production	896,284 Lbs		
Cheese Yield	10.37%		
Pounds Of Cheese	103,716 Lbs		
(cheese yield x daily milk usage)			
Pounds Of Whey Fat	1,255 Lbs		
(predraw whey fat x daily whey production) - (daily whey production x .0005)			
Dollar Value Of Cheese	\$140,017	\$139,050	\$966.58
Dollar Value Of Whey Fat	1,505.76	1,937.52	(\$431.76)

*****DAILY INCREASE IN REVENUE*****

\$534.82

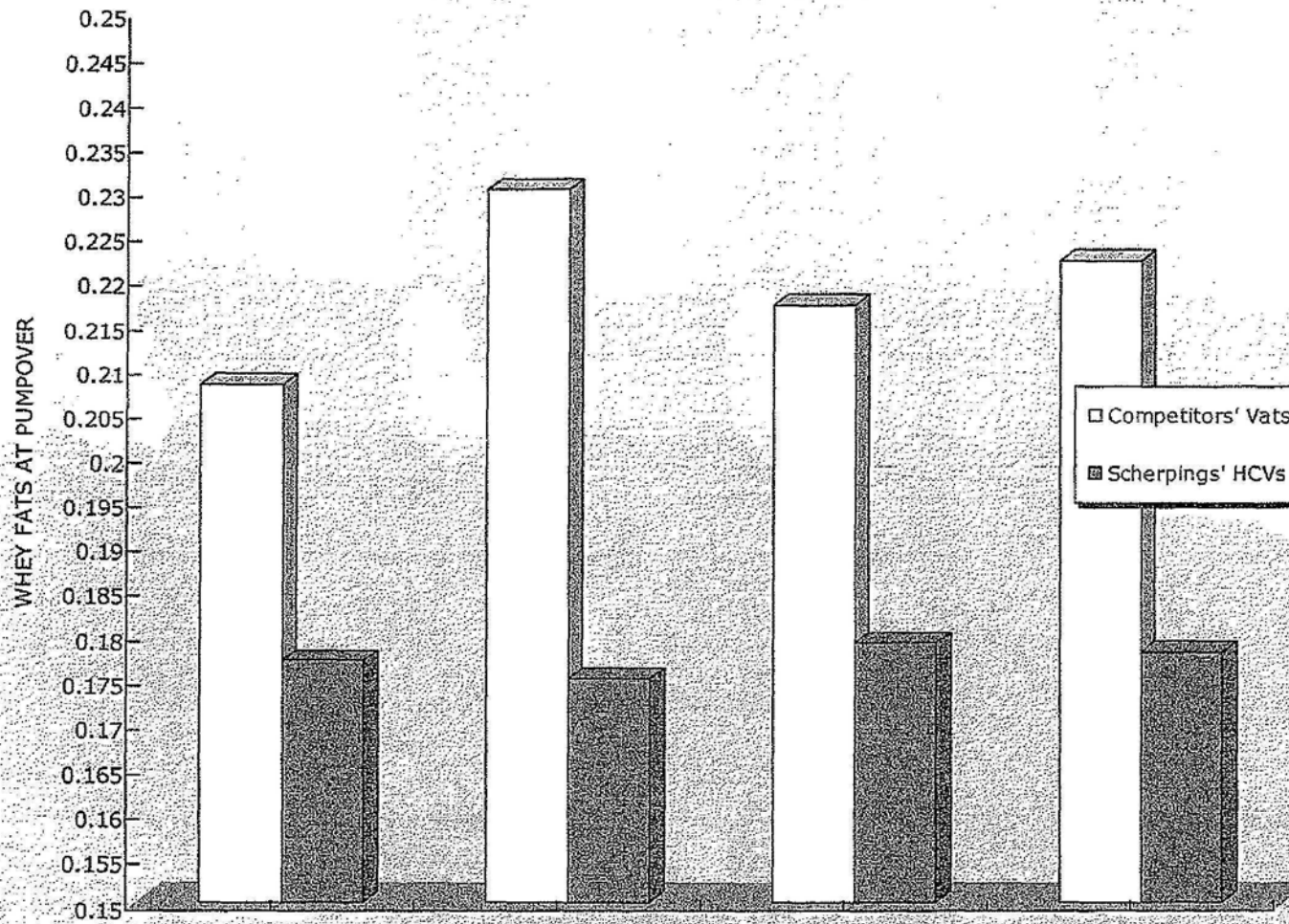
*****YEARLY INCREASE IN REVENUE*****

\$195,208

Lower and Consistent Whey Fats with the HCV



SSS

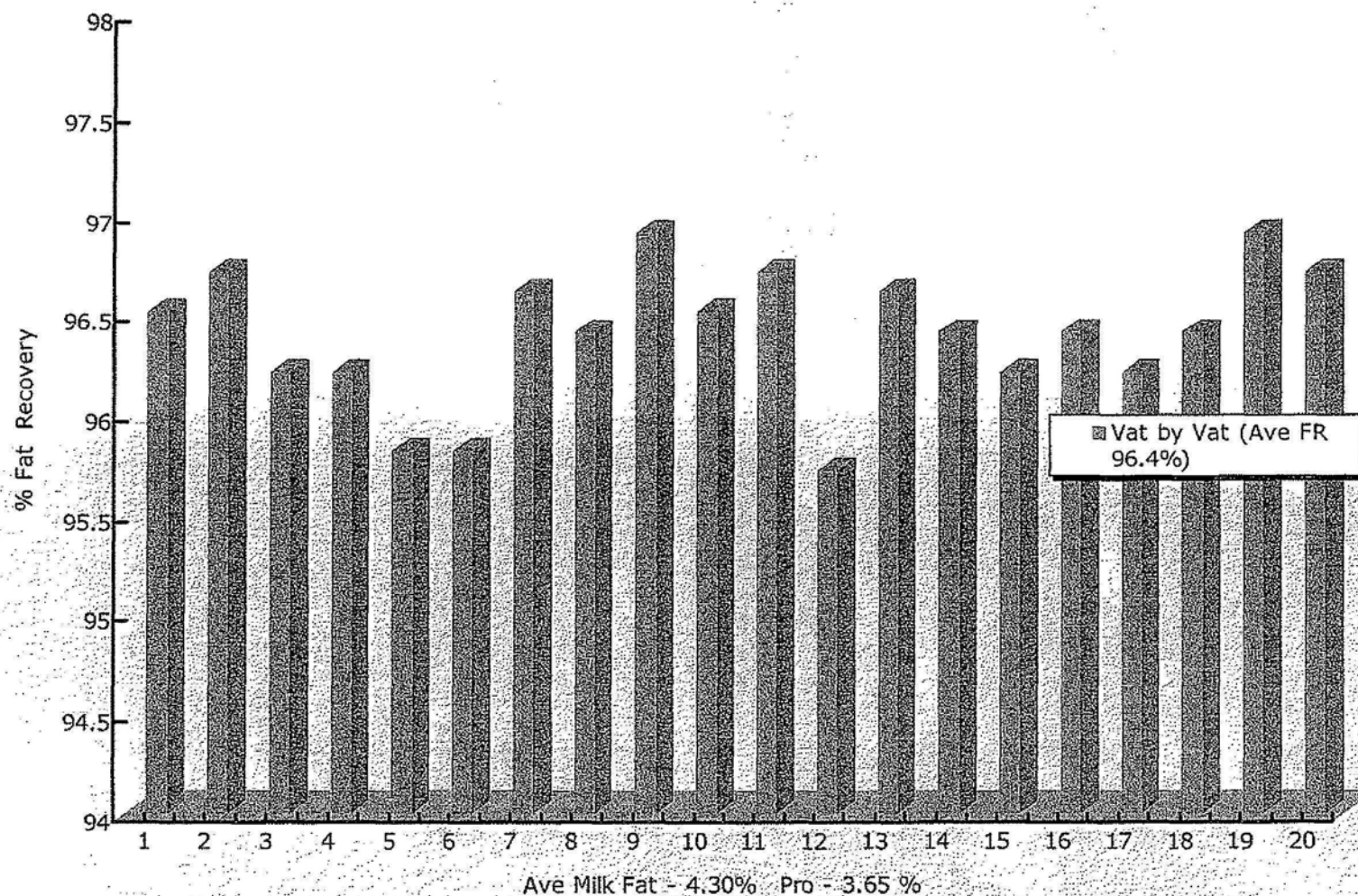


Ave Whey Fats Based on 6 Samples for each Vat

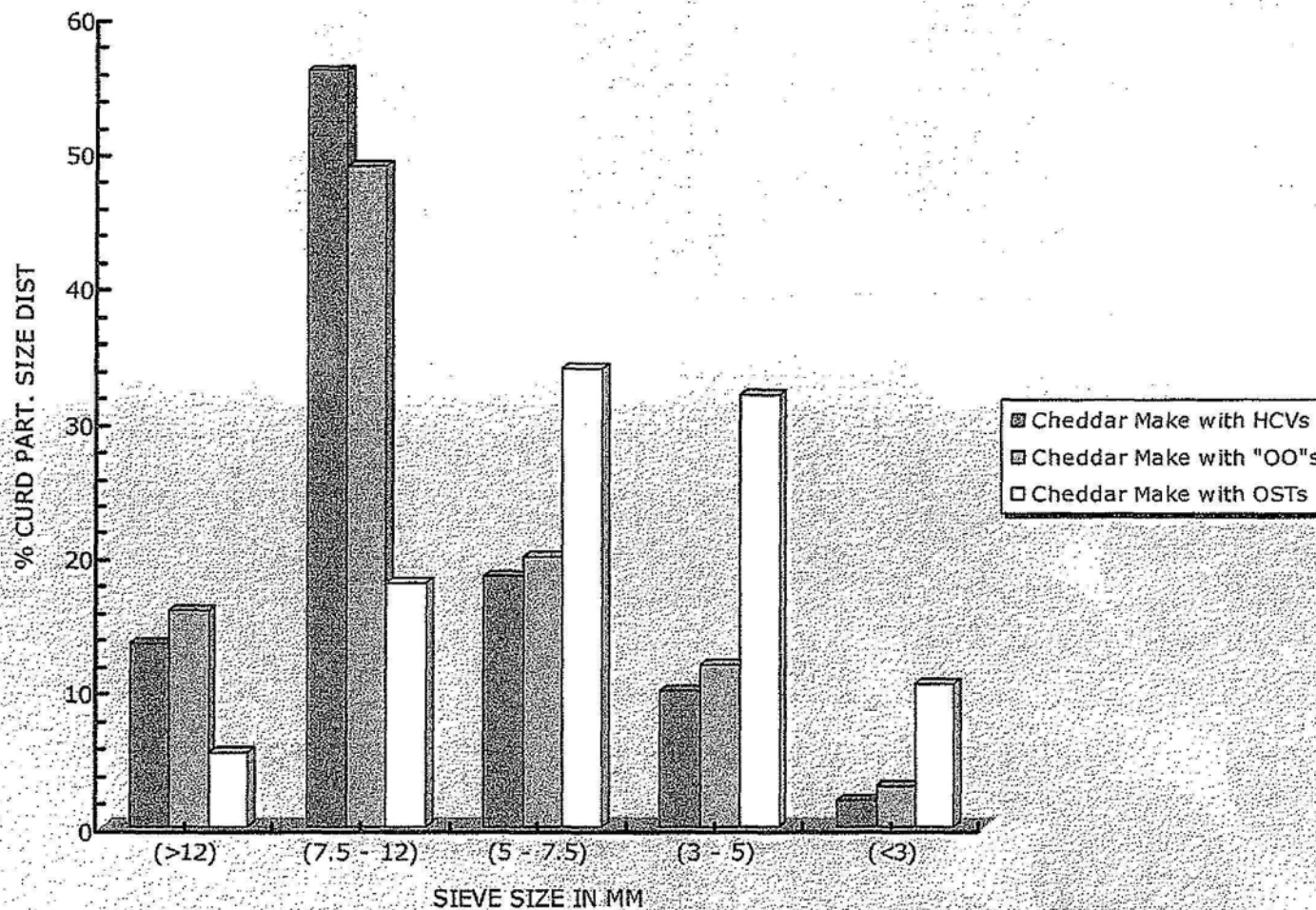
Fat Recovery in Cheddar Cheese Using HCV



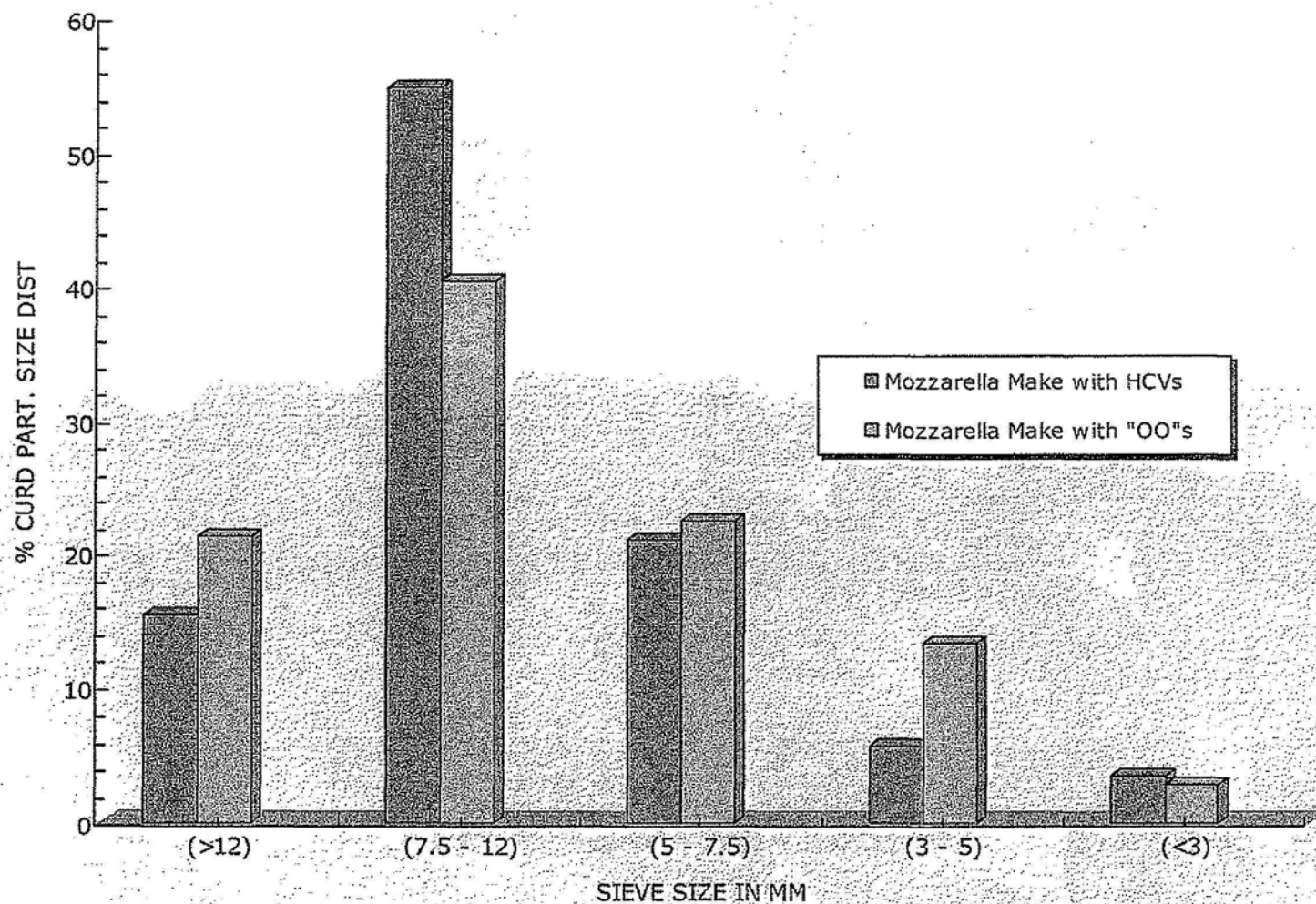
SSS



Curd Particle Size Distribution



Curd Particle Size Distribution



HCV Installed Base



Capacity/Model#	Quantity	Client Name	Country	Date of Delivery	Cheese Type
HCV-50	6	Alto Dairy, WI	USA	Jul-96	Mozzarella and Reduced Fat
HCV-35	4	Amalgamated Dairies Limited, PEI	Canada	Mar-04	American and European Varieties
HCV-45	4	Antigo Cheese, ID	USA	Mar-96	Cheddar and related American Varieties
HCV-30	3	Baker Cheese Factory, Inc., WI	USA	Jul-99	Mozzarella for string cheese
HCV-30	1	Baker Cheese Factory, Inc., WI	USA	Apr-04	Mozzarella for string cheese
HCV-50	8	Bongards, MN	USA	Dec-98	Cheddar and related American Varieties
HCV-50	5	Brewster Dairy, Inc., OH	USA	Mar-04	Swiss Cheese
HCV-45	4	Burnett Dairy Coop, WI	USA	Mar-04	Mozzarella and American Varieties
HCV-40	4	Cabot Cooperative Creamery, VT	USA	Apr-04	Cheddar and related American Varieties
HCV-45	4	DairiConcepts, SD	USA	Oct-96	Cheddar and related American Varieties
HCV-40	4	Dairy Farmers of America, CA	USA	May-93	Mozzarella, Provolone and related soft Italian varieties
HCV-50	5	Dairy Farmers of America, CA	USA	Mar-96	Cheddar and related American Varieties
HCV-55	6	Davisco International, Inc., SD	USA	Jul-04	Mozzarella
HCV-30	1	Deseret Milk Plant, UT	USA	Oct-92	Cheddar and related American Varieties
HCV-40	4	Edelweiss Cheese Company, WI	USA	Nov-97	Cheddar and related American Varieties
HCV-50	5	Ellsworth Co-op Creamery, WI	USA	Jul-94	Cheddar and related American Varieties
HCV-40	4	Farmdale Creamery, CA	USA	Sep-99	Cheddar and related American Varieties
HCV-55	7	First District Association, MN	USA	Aug-97	Cheddar and related American Varieties
HCV-45	6	Glanbia Foods, Inc., ID	USA	Apr-94	Cheddar and related American Varieties
HCV-50	1	Glanbia Foods, Inc., ID	USA	Jan-97	Cheddar and related American Varieties
HCV-55	12	Glanbia Foods, Inc., ID	USA	Dec-99	Cheddar and related American Varieties
HCV-60	6	Golden Cheese Company, CA	USA	Aug-99	Cheddar and related American Varieties
HCV-45	6	Gossner's Cheese Company, UT	USA	Feb-91	Swiss, Muenster and Cheddar
HCV-55	6	Gossner's Cheese Company, ID	USA	Feb-91	Swiss, Muenster and Cheddar
HCV-45	6	Grande Cheese Company, WI	USA	Aug-95	Mozzarella, Provolone and related soft Italian varieties
HCV-50	4	Hilmar Cheese, CA	USA	Jan-96	Cheddar, Monterey Jack and related American varieties
HCV-55	13	Hilmar Cheese, CA	USA	Aug-97	Cheddar, Monterey Jack and related American varieties
HCV-60	9	Hilmar Cheese, CA	USA	Jan-00	Cheddar, Monterey Jack and related American varieties
HCV-40	3	Imperial Valley Cheese, CA	USA	Nov-98	Swiss, Muenster and Cheddar
HCV-50	12	Jerome Cheese, ID	USA	Oct-92	Cheddar, Low Fat and No Fat Cheeses
HCV-60	10	Kiwi Co-op Dairies Limited	New Zealand	Jun-94	Mozzarella, Provolone and related Italian varieties
HCV-60	8	Kraft Foods, CA	USA	Aug-93	Parmesan, Cheddar and related American varieties
HCV-60	20	Leprino Foods Lemoore West, CA	USA	Jan-04	Mozzarella
HCV-35	6	Leprino Foods, NE	USA	Mar-92	Mozzarella, Provolone and related soft Italian varieties
HCV-50	1	LeSueur Cheese Company, MN	USA	Mar-99	Cheddar and related American Varieties
HCV-45	1	Marquez Brothers Mexican Imports, CA	USA	Jan-93	Queso Freso, Muenster, Monterey Jack, Manchego
HCV-50	4	Marquez Brothers Mexican Imports, CA	USA	May-00	Queso Freso, Muenster, Monterey Jack, Manchego
HCV-40	4	Mullins Cheese Company, WI	USA	Jan-04	Cheddar and related American Varieties
HCV-40	2	Nelson - Ricks Creamery Co., ID	USA	Jan-94	Cheddar, Colby, Muenster, Monterey Jack and Mozzarella
HCV-55	5	Saputo Cheese USA, CA	USA	Sep-97	Mozzarella, Provolone and related
HCV-50	4	Saputo Cheese USA, VT	USA	May-91	Cheddar and related American Varieties
HCV-40	4	Saputo Cheese USA, WI	USA	May-91	Parmesan, Mozzarella, Provolone and related varieties
HCV-55	6	Sorrento-Lactalis, ID	USA	Jul-04	Cheddar and related American Varieties
HCV-60	15	Southwest Cheese Company, NM	USA	Apr-05	Cheddar and related American Varieties and Mozzarella
HCV-45	7	Swiss Valley Farms, IA	USA	Aug-04	Swiss and Baby Swiss
HCV-50	10	WestFarm Foods, WA	USA	Nov-94	Cheddar and related American Varieties
HCV-55	6	Weyauwega Milk Products, WI	USA	Jun-99	Cheddar and related American Varieties

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Carlisle Process Systems

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Comparison of Impact on Class, Component, and Blend Prices by Correcting Butterfat Recovery in the Cheese to Protein Formula

04/06/07

BF Recovery
 BF Amount
 Casein Percent
 Protein Amount
 Moisture
 Cheese Yield from Butter
 Lbs. Cheddar Cheese / 1 Lb BF
 Lbs. Cheddar Cheese / 3.5 Lb BF
 Pounds of Cheese/lb of protein
 Cheese yield from protein
 Product Price
 Make Allowance
 Net Per Pound
 Product Yield
 Product Price
 Make Allowance
 Net Per Pound
 Cheese from Butter yield
 Class III Butterfat
 Butterfat Price
 Butterfat Recovery
 Fractional pound of butter
 Class IV BF to Class III
 Fat to True Protein Ratio
 Protein Before Adjustment
 Adjustment to Protein
 Component Prices
 Diff

Butter to Butterfat		Cheese to Protein		NFDM to SNF		Solids	
Current	Changed	Current	Changed	Current	Changed	Current	Changed
		89.40%	94.00%				
		3.5	3.5				
		81.99%	81.99%				
		2.9915	2.9915				
		38.00%	38.00%				
		9.6375	9.9205				
		1.572	1.653				
		5.784	5.784				
		4.1365	4.1365				
		1.383	1.383				
1.2193	1.2193	1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
0.1202	0.1202	0.1682	0.1682	0.1570	0.1570	0.1956	0.1956
1.0991	1.0991	1.0788	1.0788	0.7304	0.7304	0.1329	0.1329
1.20	1.20	1.383	1.383	0.99	0.99	1.03	1.03
		1.247	1.247				
		0.1682	0.1682				
		1.0788	1.0788				
		1.572	1.653				
		1.6959	1.7833				
		1.3189	1.3189				
		0.9	94.00%				
		1.1870	1.2398				
		0.5088	0.5435				
		1.17	1.17				
		1.4920	1.4920				
		0.5953	0.6359				
1.3189	1.3189	2.0873	2.1278	0.7231	0.7231	0.1369	0.1369
	0.0000		0.0405		0.0000		0.0000

Using Current Formula
 Based on Changes
 Difference

At Standard Tests			
Class I	Class II	Class III	Class IV
11.64	11.60	11.64	10.90
11.76	11.60	11.76	10.90
0.12	0.00	0.12	0.00

Using Current Formula
 Based on Changes
 Difference

Prices At Test Cwt				
Class I	Class II	Class III	Class IV	Blend
9.70	16.80	11.73	12.78	11.71
9.82	16.80	11.85	12.78	11.81
0.12	0.00	0.12	0.00	0.09

Using Current Formula
 Based on Changes
 Difference
 Per Avg \$/Producer

Dollars At Test (\$000,000)				
Class I	Class II	Class III	Class IV	Pool
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129
\$4,448	\$2,537	\$5,610	\$1,645	\$14,241
\$56	\$0	\$56	\$0	\$112
				\$2,180

TTT

Ratio of Butterfat to True Protein at Various Tests

BF%	3.00	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50	3.55	3.60	3.65	3.70	3.75
True Pro%																
2.85	1.053	1.070	1.088	1.105	1.123	1.140	1.158	1.175	1.193	1.211	1.228	1.246	1.263	1.281	1.298	1.3
2.90	1.034	1.052	1.069	1.086	1.103	1.121	1.138	1.155	1.172	1.190	1.207	1.224	1.241	1.259	1.276	1.2
2.95	1.017	1.034	1.051	1.068	1.085	1.102	1.119	1.136	1.153	1.169	1.186	1.203	1.220	1.237	1.254	1.2
3.00	1.000	1.017	1.033	1.050	1.067	1.083	1.100	1.117	1.133	1.150	1.167	1.183	1.200	1.217	1.233	1.2
3.05	0.984	1.000	1.016	1.033	1.049	1.066	1.082	1.098	1.115	1.131	1.148	1.164	1.180	1.197	1.213	1.2
3.10	0.968	0.984	1.000	1.016	1.032	1.048	1.065	1.081	1.097	1.113	1.129	1.145	1.161	1.177	1.194	1.2
3.15	0.952	0.968	0.984	1.000	1.016	1.032	1.048	1.063	1.079	1.095	1.111	1.127	1.143	1.159	1.175	1.1
3.20	0.938	0.953	0.969	0.984	1.000	1.016	1.031	1.047	1.063	1.078	1.094	1.109	1.125	1.141	1.156	1.1
3.25	0.923	0.938	0.954	0.969	0.985	1.000	1.015	1.031	1.046	1.062	1.077	1.092	1.108	1.123	1.138	1.1
3.30	0.909	0.924	0.939	0.955	0.970	0.985	1.000	1.015	1.030	1.045	1.061	1.076	1.091	1.106	1.121	1.1
3.35	0.896	0.910	0.925	0.940	0.955	0.970	0.985	1.000	1.015	1.030	1.045	1.060	1.075	1.090	1.104	1.1
3.40	0.882	0.897	0.912	0.926	0.941	0.956	0.971	0.985	1.000	1.015	1.029	1.044	1.059	1.074	1.088	1.1
3.45	0.870	0.884	0.899	0.913	0.928	0.942	0.957	0.971	0.986	1.000	1.014	1.029	1.043	1.058	1.072	1.0
3.50	0.857	0.871	0.886	0.900	0.914	0.929	0.943	0.957	0.971	0.986	1.000	1.014	1.029	1.043	1.057	1.0
3.55	0.845	0.859	0.873	0.887	0.901	0.915	0.930	0.944	0.958	0.972	0.986	1.000	1.014	1.028	1.042	1.0
3.60	0.833	0.847	0.861	0.875	0.889	0.903	0.917	0.931	0.944	0.958	0.972	0.986	1.000	1.014	1.028	1.0
3.65	0.822	0.836	0.849	0.863	0.877	0.890	0.904	0.918	0.932	0.945	0.959	0.973	0.986	1.000	1.014	1.0
3.70	0.811	0.824	0.838	0.851	0.865	0.878	0.892	0.905	0.919	0.932	0.946	0.959	0.973	0.986	1.000	1.0
3.75	0.800	0.813	0.827	0.840	0.853	0.867	0.880	0.893	0.907	0.920	0.933	0.947	0.960	0.973	0.987	1.0
3.80	0.789	0.803	0.816	0.829	0.842	0.855	0.868	0.882	0.895	0.908	0.921	0.934	0.947	0.961	0.974	0.9

Ratio of Butterfat to True Protein at Various Tests

04/05/0

BF% True Pro%	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50	3.55	3.60	3.65	3.69	3.70	3.75	3.8
2.85	1.088	1.105	1.123	1.140	1.158	1.175	1.193	1.211	1.228	1.246	1.263	1.281		1.298	1.316	1.33
2.90	1.069	1.086	1.103	1.121	1.138	1.155	1.172	1.190	1.207	1.224	1.241	1.259		1.276	1.293	1.31
2.95	1.051	1.068	1.085	1.102	1.119	1.136	1.153	1.169	1.186	1.203	1.220	1.237		1.254	1.271	1.28
2.9915									1.170							
3.00	1.033	1.050	1.067	1.083	1.100	1.117	1.133	1.150	1.167	1.183	1.200	1.217		1.233	1.250	1.26
3.04													1.214			
3.05	1.016	1.033	1.049	1.066	1.082	1.098	1.115	1.131	1.148	1.164	1.180	1.197		1.213	1.230	1.24
3.10	1.000	1.016	1.032	1.048	1.065	1.081	1.097	1.113	1.129	1.145	1.161	1.177		1.194	1.210	1.22
3.15	0.984	1.000	1.016	1.032	1.048	1.063	1.079	1.095	1.111	1.127	1.143	1.159		1.175	1.190	1.20
3.20	0.969	0.984	1.000	1.016	1.031	1.047	1.063	1.078	1.094	1.109	1.125	1.141		1.156	1.172	1.18
3.25	0.954	0.969	0.985	1.000	1.015	1.031	1.046	1.062	1.077	1.092	1.108	1.123		1.138	1.154	1.16
3.30	0.939	0.955	0.970	0.985	1.000	1.015	1.030	1.045	1.061	1.076	1.091	1.106		1.121	1.136	1.15
3.35	0.925	0.940	0.955	0.970	0.985	1.000	1.015	1.030	1.045	1.060	1.075	1.090		1.104	1.119	1.13
3.40	0.912	0.926	0.941	0.956	0.971	0.985	1.000	1.015	1.029	1.044	1.059	1.074		1.088	1.103	1.11
3.45	0.899	0.913	0.928	0.942	0.957	0.971	0.986	1.000	1.014	1.029	1.043	1.058		1.072	1.087	1.10
3.50	0.886	0.900	0.914	0.929	0.943	0.957	0.971	0.986	1.000	1.014	1.029	1.043		1.057	1.071	1.08

Comparison of Impact on Class, Component, and Blend Prices by Correcting Cheese Yields to Current Formulas

04/06/07

	Butter to Butterfat		Cheese to Protein		NFDM to SNF		Solids	
	Current	Changed	Current	Changed	Current	Changed	Current	Changed
Product Price	1.2193	1.2193	1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
Make Allowance	0.1202	0.1202	0.1682	0.1682	0.1570	0.1570	0.1956	0.1956
Net Per Pound	1.0991	1.0991	1.0788	1.0788	0.7304	0.7304	0.1329	0.1329
Product Yield	1.20	1.20	1.383	1.405	0.99	0.99	1.03	1.03
Product Price			1.247	1.247				
Make Allowance			0.1682	0.1682				
Net Per Pound			1.0788	1.0788				
Cheese from Butter yield			1.572	1.653				
Class III Butterfat			1.6959	1.7833				
Butterfat Price			1.3189	1.3189				
Butterfat Recovery			0.9	0.94				
Fractional pound of butter			1.1870	1.2398				
Class IV BF to Class III			0.5088	0.5435				
Fat to True Protein Ratio			1.17	1.214				
Protein Before Adjustment			1.4920	1.5157				
Adjustment to Protein			0.5953	0.6598				
Component Prices	1.3189	1.3189	2.0873	2.1755	0.7231	0.7231	0.1369	0.1369
Diff		0.0000		0.0882		0.0000		0.0000

Using Current Formula
Based on Changes
Difference

At Standard Tests			
Class I	Class II	Class III	Class IV
11.64	11.60	11.64	10.90
11.90	11.60	11.90	10.90
0.26	0.00	0.26	0.00

Using Current Formula
Based on Changes
Difference

Prices At Test Cwt				
Class I	Class II	Class III	Class IV	Blend
9.70	16.80	11.73	12.78	11.71
9.96	16.80	11.99	12.78	11.92
0.27	0.00	0.26	0.00	0.20

Using Current Formula
Based on Changes
Difference
Per Avg \$/Producer

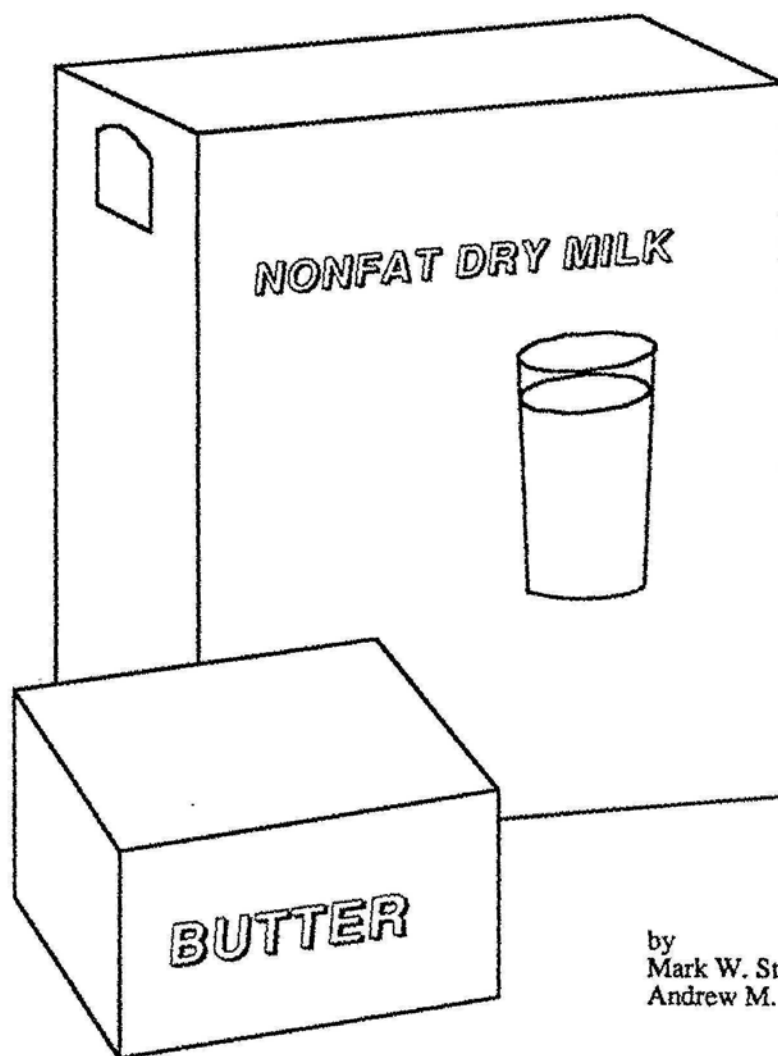
Dollars At Test (\$000,000)				
Class I	Class II	Class III	Class IV	Pool
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129
\$4,514	\$2,537	\$5,676	\$1,645	\$14,373
\$121	\$0	\$122	\$0	\$244
				\$4,743

WWW

September 1989

A.E. Res. 89-19

Manufacturing Costs In Ten Butter/Powder Processing Plants



by
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Appendix B

Calculations of Costs Per Pound and cwt

—Assumptions:

- cwt of raw milk yields 4.35 pounds of butter, 8.69 pounds of NDM and 0.44 pounds of buttermilk powder.
- it costs the same to produce a pound of buttermilk powder from buttermilk as it does to produce a pound of NDM from skim milk. Therefore cwt of raw milk yields 4.35 pounds of butter and 9.13 pounds of powder (8.69+0.44).

—Definitions:

- AB = annual pounds of butter (production during the June '87–May '88 year)
- AP = annual pounds of powder (production during the June '87–May '88 year) where powder refers to NDM and buttermilk powder.
- VB = variable costs of producing a pound of butter.
- VP = variable costs of producing a pound of powder.
- FC = annual fixed costs (daily fixed cost multiplied by 365).
- BR = the proportion of milk equivalent processed as butter³¹.
- PR = the proportion of milk equivalent processed as powder (equal to 1-BR).
- CWT = the number of cwt raw milk processed at a plant during the twelve months of the survey³².
- BU = the average percent usage of butter processing capacity (see Figure 4)

$$\$/\text{lb of Butter} = \frac{(AB \times VB) + (FC \times BR)}{AB}$$

$$\$/\text{lb of Powder} = \frac{(AP \times VP) + (FC \times PR)}{AP}$$

$$\$/\text{cwt of Milk} = \left(\frac{FC}{CWT} \right) + (VB \times 4.35) + (VP \times 9.13)$$

$$\$/\text{lb of Butter at 100\% Capacity}^{33} = \frac{\left(\frac{AB}{BU} \times VB \right) + (FC \times BR)}{\left(\frac{AB}{BU} \right)}$$

³¹ This value is used to determine how much of the fixed cost should be charged to butter. It is calculated by first determining the ME for a plant on a butterfat basis (MEb) and the ME on a solids-not-fat basis (MEs). BR is then equal to MEb divided by (MEb+MEs).

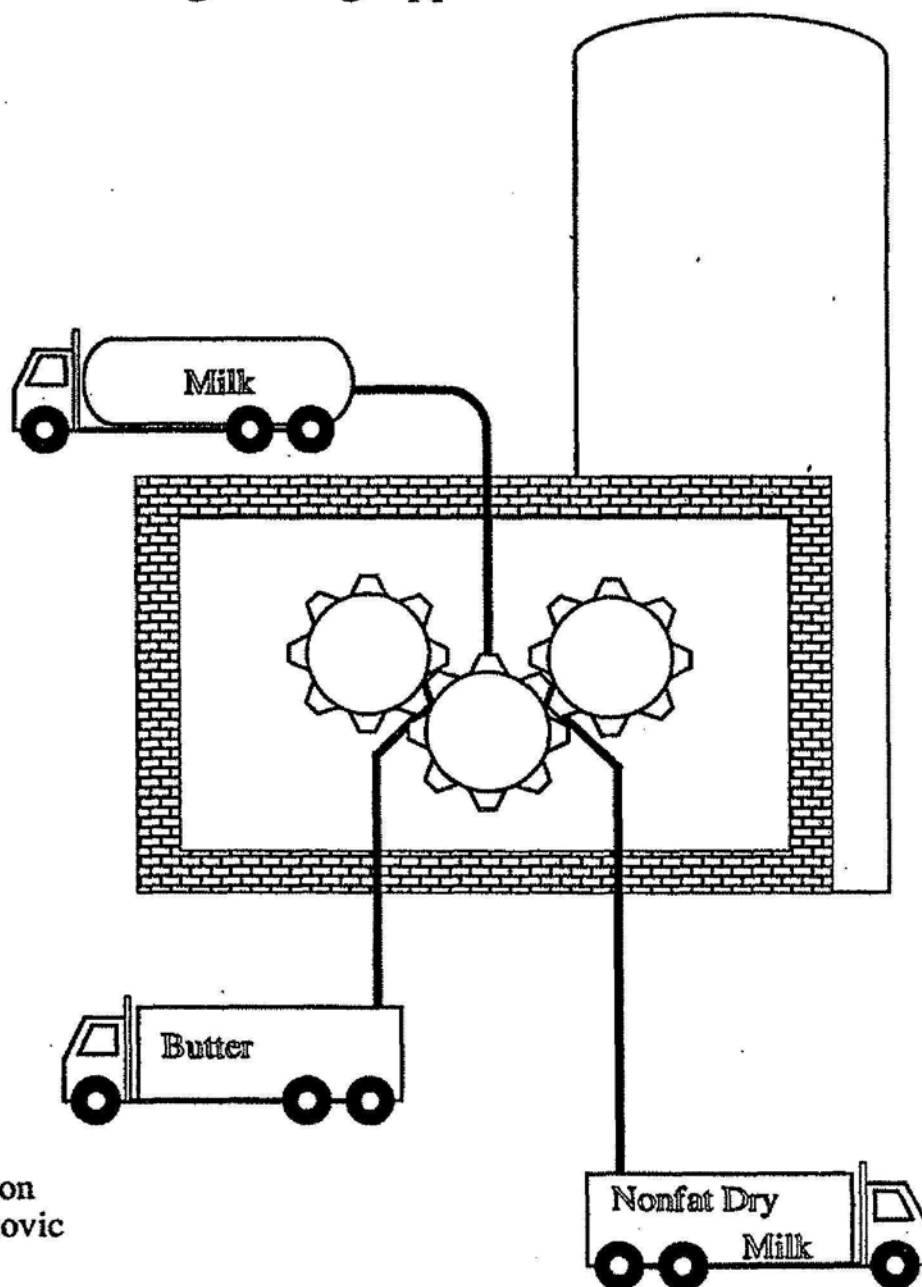
³² This was a judgement call for any particular plant. It was based on the average milk equivalent processed at the plant during the twelve months of the study. The result does not appear to be overly sensitive to an incorrect judgement within the bounds of MEb and MEs.

³³ The \$/lb of powder at 100% capacity can be calculated by making the appropriate substitutions.

June 1990

A.E. Res. 90-6

Determination of Butter/Powder Plant Manufacturing Costs Utilizing an Economic Engineering Approach



by
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Product Assumptions, Theoretical Yields And Plant Volumes

It is necessary to make some assumptions regarding the composition of raw milk and the products manufactured from it. Although milk is a complex fluid with many identifiable fractions, there are only three that are important to a butter/powder plant: butterfat, solids-not-fat (hereafter referred to as "SNF") and water. Total solids are equal to butterfat + SNF. Table 2 shows the product assumptions that are used in this study.

Table 2. Assumed Composition of Products

Product	%BF	%SNF	%Moisture
Raw Milk ⁷	3.71%	8.70%	87.60%
Skim Milk	0.20%	9.02%	90.78%
Cream	40.00%	5.37%	54.63%
Butter	80.50%	1.60%	17.90%
Buttermilk	0.60%	9.10%	90.30%
Bulk Condensed Milk	0.78%	35.22%	64.00%
Bulk Blends	22.00%	25.51%	52.49%
NDM	2.10%	94.70%	3.20%
Buttermilk Powder	5.99%	90.81%	3.20%

These product values can be used to determine theoretical yields in butter/powder plants. In practice, the theoretical yields are not achieved and butterfat losses approach 2% while SNF losses are approximately 0.6%. Figure 1 is a diagram of major processing events in a butter/powder plant and the theoretical yields from a hundredweight (cwt) of raw milk along the production path. The diagram illustrates the possible inputs and outputs which are discussed in this report. For any plant or any given point in time, only parts of this process flow may be observed.

⁷ These values are the weighted average component levels for the Upper Midwest in 1985 according to USDA staff paper 86-01 entitled "Upper Midwest Marketing Area—Analysis of Component Levels in Individual Herd Milk at the Farm Level, 1984 and 1985".

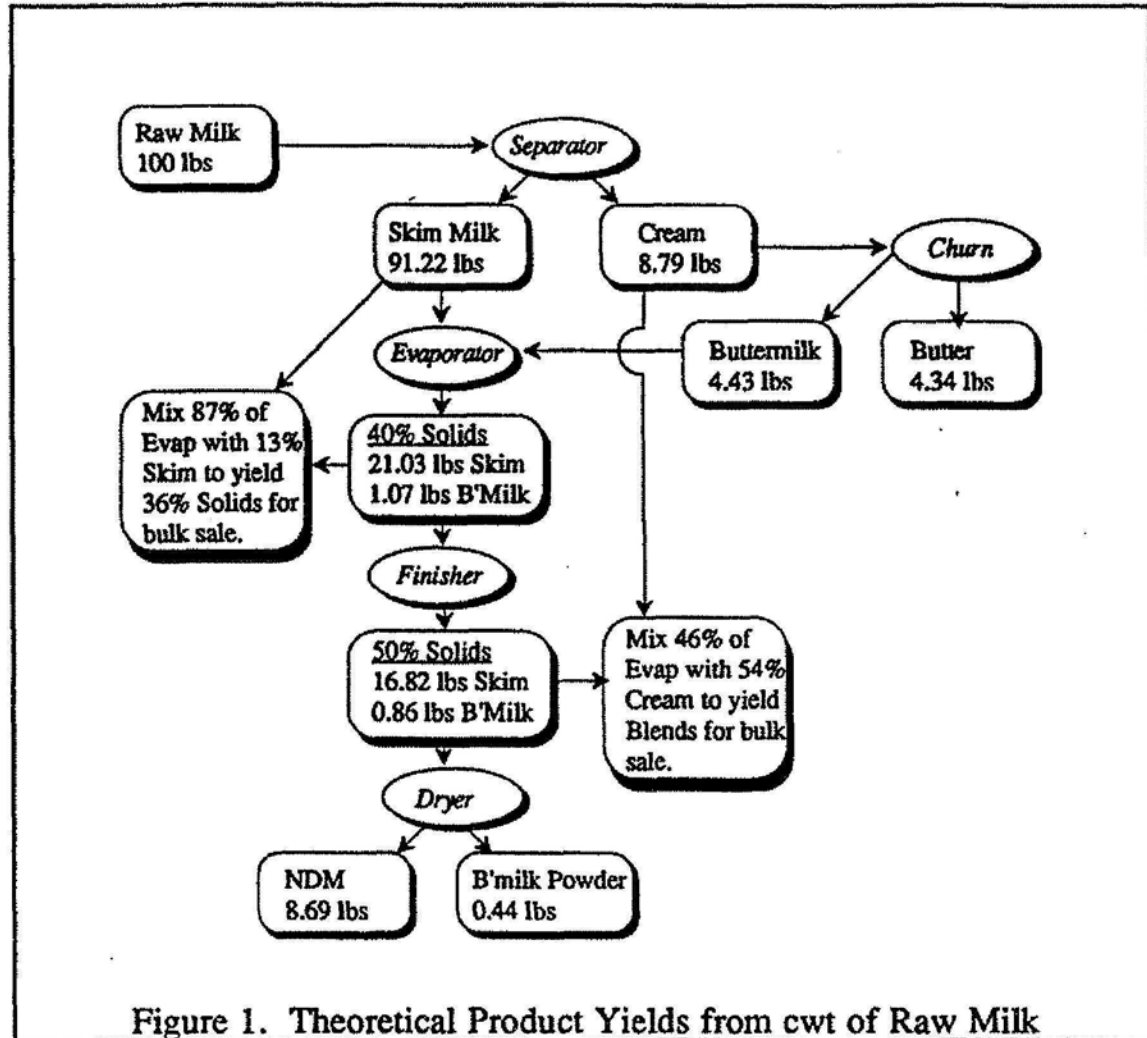


Figure 1. Theoretical Product Yields from cwt of Raw Milk

Using these theoretical yields and the model plant input and output mixes from the section entitled "Models and Plant Sizes", a table of plant product volumes can be generated. Table 3 shows the throughput that is used by the engineering firm as the bases to design the model plants.



H

BUTTER AND POWDER YIELDS

The current Class 4a pricing formula incorporates two yield factors:

BUTTER:	1.2 lbs. of butter produced per lb. of butterfat
NFDM:	0.99 lbs. of NFDM produced per lb. of SNF

The NFDM yield factors has been analyzed and recalculated several times since it was introduced into milk pricing formulas. The NFDM yield was set at 0.96 from 1968 to 1972. The yield factor was increased to 1.00 from 1972 to 1977 and then decreased to 0.99 from 1977 to present. Although the butter yield factor of 1.2 has been analyzed regularly, it has never been changed since it was adopted in 1955. The current yields of 1.2 for butter and 0.99 for NFDM were assessed and verified in 1990 using receipts and usage information obtained from two butter-powder operations.

The Department has received requests from the industry to review plant information that could be used to calculate yield factors and determine if the current factors continue to be appropriate. While the California Department of Food and Agriculture collects product yield data directly from most Cheddar cheese plants, it does not collect yield data from butter-powder plants. Thus, product yields have been computed from receipts and usage information obtained from the Department's plant cost studies.

Most of the butter-powder plants in California manufacture multiple products and buy and/or sell large quantities of cream, condensed skim and condensed buttermilk. Consequently, tracking milk components entering the plant as milk or some intermediate product and exiting the plant as finished and packaged products or as a plant loss is complex. The procedure used to obtain the yields simplifies plant receiving, processing and packaging activities, and the resulting figures should be treated as unrefined estimates of butter and powder yields.

Using 1996 receipts and usage figures from nine powder plants and eight butter plants, estimates of product yields were computed (Table 1). The yield factors accounted for losses of milk components within each plant. In 1996, these nine powder plants processed 95% of NFDM produced in California, and the eight butter plants processed 95% of the butter produced in California.

Butter yields among the eight plants showed little variability and were similar to the current yield factor of 1.2. The yield factors for powder, which included both NFDM and BMP, were similar among the nine powder plants (range: 1.0111 to 1.0406). However, individual yields for NFDM and BMP were more variable.

The current yield factor considers both NFDM and BMP, and the powder yield in Table 1 is consistent with that view. However, there may be some interest in the breakdown of total powder yield into NFDM yield and BMP yield. Seven of the nine powder plants processed BMP. Two

Table 1. Butter and Powder Yields for California Processing Plants

	Butter Yield ¹	Fat Loss ²	Powder Yield ^{1,3}	SNF Loss ⁴
<i>Number of Plants</i>	8	8	9	9
<i>Weighted Average</i>	1.2213	1.56%	1.0239	2.13%
<i>Low</i>	1.2079	1.00%	1.0111	1.11%
<i>High</i>	1.2341	2.41%	1.0406	4.16%

¹"Yield" refers to the amount of product obtained from a unit of fat or SNF.

²"Fat Loss" is the difference between the fat received at the plant and the fat contained in finished products, i.e., fat that is unavailable for use in finished products.

³"Powder Yield" is the sum of the individual plant nonfat dry milk and buttermilk powder yields.

⁴"SNF Loss" is the difference between the SNF received at the plant and the SNF contained in finished products, i.e., SNF that is unavailable for use in finished products.

of the seven plants produced considerably higher percentages of BMP than the other five plants, a result of receiving large quantities of cream. If these two plants were included in the analysis, the considerable variations in NFDM and BMP production would not allow for meaningful and representative yield estimates of individual powder products obtainable from farm milk. Consequently, these two plants were omitted. The five remaining plants accounted for 67% of the NFDM and 61% of the BMP processed in California in 1996.

Among the five plants included in the calculation, the yield for NFDM ranged from 0.9309 to 0.9815 and the yield for BMP ranged from 0.0406 to 0.0749 (Table 2). Using an average weighted by production volume, the five plants obtained 0.9736 pounds of NFDM and 0.0521 pounds of BMP from 1 pound of SNF.

Table 2. Powder, NFDM and BMP Yields for Select California Processing Plants^{1, 2, 3, 4}

	Powder Yield	NFDM Yield	BMP Yield
<i>Number of Plants</i>	5	5	5
<i>Weighted Average</i>	1.0252	0.9736	0.0521
<i>Low</i>	1.0111	0.9309	0.0406
<i>High</i>	1.0406	0.9815	0.0749

¹"Yield" refers to the amount of product obtained from a unit of fat or SNF.

²"Powder Yield" is the sum of the individual plant nonfat dry milk and buttermilk powder yields.

³"NFDM" = nonfat dry milk.

⁴"BMP" = buttermilk powder.

**Comparison of Impact on Class, Component, and Blend
Prices by Correcting NFDMYields to Current Formulas**

04/06/07

	Butter to Butterfat		Cheese to Protein		NFDN to SNF		Solids	
	Current	Changed	Current	Changed	Current	Changed	Current	Changed
Product Price	1.2193	1.2193	1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
Make Allowance	0.1202	0.1202	0.1682	0.1682	0.1570	0.1570	0.1956	0.1956
Net Per Pound	1.0991	1.0991	1.0788	1.0788	0.7304	0.7304	0.1329	0.1329
Product Yield	1.20	1.20	1.383	1.383	0.99	1.02	1.03	1.03
Product Price			1.247	1.247				
Make Allowance			0.1682	0.1682				
Net Per Pound			1.0788	1.0788				
Cheese from Butter yield			1.572	1.572				
Class III Butterfat			1.6959	1.6959				
Butterfat Price			1.3189	1.3189				
Butterfat Recovery			0.9	0.9				
Fractional pound of butter			1.1870	1.1870				
Class IV BF to Class III			0.5088	0.5088				
Fat to True Protein Ratio			1.17	1.17				
Protein Before Adjustment			1.4920	1.4920				
Adjustment to Protein			0.5953	0.5953				
Component Prices	1.3189	1.3189	2.0873	2.0873	0.7231	0.7450	0.1369	0.1369
Diff		0.0000		0.0000		0.0219		0.0000

Using Current Formula
Based on Changes
Difference

At Standard Tests			
Class I	Class II	Class III	Class IV
11.64	11.60	11.64	10.90
11.64	11.79	11.64	11.09
0.00	0.19	0.00	0.19

Using Current Formula
Based on Changes
Difference

Prices At Test Cwt				
Class I	Class II	Class III	Class IV	Blend
9.70	16.80	11.73	12.78	11.71
9.70	16.98	11.73	12.96	11.76
0.00	0.18	0.00	0.18	0.04

Using Current Formula
Based on Changes
Difference
Per Avg \$/Producer

Dollars At Test (\$000,000)				
Class I	Class II	Class III	Class IV	Pool
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129
\$4,393	\$2,565	\$5,554	\$1,668	\$14,180
\$0	\$28	\$0	\$23	\$51
				\$984

ZZZ

AAAA

Comparison of Impact on Class, Component, and Blend Prices by Correcting Yields to Current Formulas

04/06/07

Butter to Butterfat		Cheese to Protein		NFDM to SNF		Dry Whey to Other Solids	
Current	As Changed	Current	As Changed	Current	As Changed	Current	As Changed
1.2193	1.2193	1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
0.1202	0.1202	0.1682	0.1682	0.1570	0.1570	0.1956	0.1956
1.0991	1.0991	1.0788	1.0788	0.7304	0.7304	0.1329	0.1329
1.20	1.220	1.383	1.405	0.99	1.0200	1.03	1.03
		1.247	1.247				
		0.1682	0.1682				
		1.0788	1.0788				
		1.572	1.653				
		1.6959	1.7833				
		1.3189	1.3409				
		0.9	0.9				
		1.1870	1.2068				
		0.5088	0.5764				
		1.17	1.214				
		1.4920	1.5157				
		0.5953	0.6998				
1.3189	1.3409	2.0873	2.2155	0.7231	0.7450	0.1369	0.1369
	0.0220		0.1282		0.0219		0.0000

At Standard Tests			
Class I	Class II	Class III	Class IV
11.64	11.60	11.64	10.90
12.10	11.86	12.10	11.16
0.46	0.27	0.46	0.27

Prices At Test Cwt				
Class I	Class II	Class III	Class IV	Blend
9.70	16.80	11.73	12.78	11.71
10.13	17.15	12.19	13.07	12.13
0.43	0.35	0.46	0.29	0.42

Dollars At Test (\$000,000)				
Class I	Class II	Class III	Class IV	Pool
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129
\$4,588	\$2,590	\$5,770	\$1,683	\$14,632
\$196	\$53	\$216	\$38	\$503

\$9,787

AAAA



Comparison: CME Cheddar Cheese Prices / Audited California Cheddar Cheese Sales

24-Month Period: December 2004 through November 2006

- Data were collected and audited from four California Cheddar cheese plants. The plants reported monthly sales volume and sales revenue for 40-pound block Cheddar cheese for the 24-month period, representing 99% of the 40-pound block Cheddar cheese sold by these audited California plants.
- The Chicago Mercantile Exchange (CME) Cheddar cheese prices are the simple average of the daily block Cheddar cheese price per pound, released by the CME, using the 26th of the prior month through the 25th of the current month.
- The weighted average California Cheddar cheese prices represent the monthly price per pound received by each plant and then weighted by sales volume.

Breakdown of CME Cheddar Cheese Prices and Audited California Cheddar Cheese Sales December 2004 through November 2006

Date	CME Cheese Prices	California Weighted Average Prices	Difference: Calif. Weighted Less CME
	<i>In Dollars Per Pound</i>		
Dec-04	\$1.6397	\$1.7019	\$0.0622
Jan-05	\$1.5766	\$1.5347	-\$0.0419
Feb-05	\$1.5299	\$1.5429	\$0.0130
Mar-05	\$1.5204	\$1.4829	-\$0.0375
Apr-05	\$1.5733	\$1.5155	-\$0.0578
May-05	\$1.4745	\$1.4594	-\$0.0151
Jun-05	\$1.4921	\$1.4719	-\$0.0202
Jul-05	\$1.5239	\$1.5165	-\$0.0074
Aug-05	\$1.4195	\$1.4205	\$0.0010
Sep-05	\$1.5384	\$1.4824	-\$0.0560
Oct-05	\$1.4849	\$1.5000	\$0.0151
Nov-05	\$1.3808	\$1.3945	\$0.0137
Dec-05	\$1.4304	\$1.4063	-\$0.0241
Jan-06	\$1.3581	\$1.3709	\$0.0128
Feb-06	\$1.2146	\$1.2575	\$0.0429
Mar-06	\$1.1586	\$1.1486	-\$0.0100
Apr-06	\$1.1667	\$1.1591	-\$0.0076
May-06	\$1.1775	\$1.1533	-\$0.0242
Jun-06	\$1.2011	\$1.1879	-\$0.0132
Jul-06	\$1.1643	\$1.1606	-\$0.0037
Aug-06	\$1.2091	\$1.1654	-\$0.0437
Sep-06	\$1.3041	\$1.2671	-\$0.0370
Oct-06	\$1.2383	\$1.2395	\$0.0012
Nov-06	\$1.3490	\$1.2766	-\$0.0724

Summary of Comparison: California Weighted Less CME

Time Period	Average Differences	
	Simple	Weighted
All 24 months	-\$0.0129	-\$0.0136
12 months ending Nov. 2005	-\$0.0109	-\$0.0113
12 months ending Nov. 2006	-\$0.0149	-\$0.0162

BBBB



Comparison: CME Butter Prices / Audited California Butter Sales

24-Month Period: December 2004 through November 2006

- Data were collected and audited from six California butter plants (declining to four plants in 2006). The plants reported monthly sales volume and sales revenue for salted bulk butter for the 24-month period, representing 100% of the salted bulk butter sold by these audited California plants.
- The Chicago Mercantile Exchange (CME) butter prices are the simple average of the daily butter price per pound, released by the CME, using the 26th of the prior month through the 25th of the current month.
- The weighted average California butter prices represent the monthly price per pound received by each plant and then weighted by sales volume.

Breakdown of CME Butter Prices and Audited California Butter Sales December 2004 through November 2006

Date	CME Butter Prices	California Weighted Average Prices	Difference: Calif. Weighted Less CME
	In Dollars Per Pound		
Dec-04	\$1.7705	\$1.8214	\$0.0509
Jan-05	\$1.5725	\$1.5544	-\$0.0181
Feb-05	\$1.6071	\$1.5833	-\$0.0238
Mar-05	\$1.5543	\$1.5375	-\$0.0168
Apr-05	\$1.5179	\$1.4914	-\$0.0265
May-05	\$1.4025	\$1.3835	-\$0.0190
Jun-05	\$1.4923	\$1.4603	-\$0.0320
Jul-05	\$1.6402	\$1.6090	-\$0.0312
Aug-05	\$1.6665	\$1.6332	-\$0.0333
Sep-05	\$1.7098	\$1.6751	-\$0.0347
Oct-05	\$1.6427	\$1.6181	-\$0.0246
Nov-05	\$1.4627	\$1.4251	-\$0.0376
Dec-05	\$1.3648	\$1.3359	-\$0.0289
Jan-06	\$1.3553	\$1.3210	-\$0.0343
Feb-06	\$1.2092	\$1.1908	-\$0.0184
Mar-06	\$1.1690	\$1.1478	-\$0.0212
Apr-06	\$1.1580	\$1.1315	-\$0.0265
May-06	\$1.1767	\$1.1477	-\$0.0290
Jun-06	\$1.1698	\$1.1367	-\$0.0331
Jul-06	\$1.1516	\$1.1206	-\$0.0310
Aug-06	\$1.2742	\$1.1900	-\$0.0842
Sep-06	\$1.3319	\$1.2839	-\$0.0480
Oct-06	\$1.3265	\$1.2800	-\$0.0465
Nov-06	\$1.2900	\$1.2485	-\$0.0415

Summary of Comparison: California Weighted Less CME

Time Period	Average Differences	
	Simple	Weighted
All 24 months	-\$0.0287	-\$0.0307
12 months ending Nov. 2005	-\$0.0206	-\$0.0210
12 months ending Nov. 2006	-\$0.0369	-\$0.0377

**Comparison of Impact on Class, Component, and Blend
Prices by Correcting Make Allowances to Current
Formulas**

04/06/07

DDDD

Product Price
Make Allowance
Net Per Pound
Product Yield
Product Price
Make Allowance
Net Per Pound
Cheese from Butter yield
Class III Butterfat
Butterfat Price
Butterfat Recovery
Fractional pound of butter
Class IV BF to Class III
Fat to True Protein Ratio
Protein Before Adjustment
Adjustment to Protein
Component Prices
Diff

Butter to Butterfat		Cheese to Protein		NFDM to SNF		Dry Whey to Other Solids	
Current	As Changed	Current	As Changed	Current	As Changed	Current	As Changed
1.2193	1.2193	1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
0.1202	0.1150	0.1682	0.1638	0.1570	0.1410	0.1956	0.1590
1.0991	1.1043	1.0788	1.0832	0.7304	0.7464	0.1329	0.1695
1.20	1.20	1.383	1.383	0.99	0.99	1.03	1.03
		1.247	1.247				
		0.1682	0.1682				
		1.0788	1.0788				
		1.572	1.572				
		1.6959	1.6959				
		1.3189	1.3252				
		0.9	0.9				
		1.1870	1.1926				
		0.5088	0.5032				
		1.17	1.17				
		1.4920	1.4981				
		0.5953	0.5888				
1.3189	1.3252	2.0873	2.0868	0.7231	0.7389	0.1369	0.1746
	0.0062		-0.0005		0.0158		0.0377

Using Current Formula
Based on Changes
Difference

At Standard Tests			
Class I	Class II	Class III	Class IV
11.64	11.60	11.64	10.90
11.87	11.76	11.87	11.06
0.24	0.16	0.24	0.16

Using Current Formula
Based on Changes
Difference

Prices At Test Cwt				
Class I	Class II	Class III	Class IV	Blend
9.70	16.80	11.73	12.78	11.71
9.92	16.98	11.96	12.94	11.93
0.23	0.18	0.23	0.16	0.22

Using Current Formula
Based on Changes
Difference
Per Avg \$/Producer

Dollars At Test (\$000,000)				
Class I	Class II	Class III	Class IV	Pool
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129
\$4,496	\$2,565	\$5,662	\$1,666	\$14,389
\$104	\$27	\$109	\$21	\$260

\$5,065

DDDD

**Comparison of Impact on Class, Component, and
Blend Prices by Correcting Yields and Make
Allowances to Current Formulas**

04/06/07

	Butter to Butterfat		Cheese to Protein		NFDM to SNF		Solids	
	Current	Changed	Current	Changed	Current	Changed	Current	Changed
Product Price	1.2193	1.2193	1.2470	1.2470	0.8874	0.8874	0.3285	0.3285
Make Allowance	0.1202	0.1150	0.1682	0.1638	0.1570	0.1410	0.1956	0.1590
Net Per Pound	1.0991	1.1043	1.0788	1.0832	0.7304	0.7464	0.1329	0.1695
Product Yield	1.20	1.220	1.383	1.405	0.99	1.0200	1.03	1.03
Product Price			1.247	1.247				
Make Allowance			0.1682	0.1682				
Net Per Pound			1.0788	1.0788				
Cheese from Butter yield			1.572	1.653				
Class III Butterfat			1.6959	1.7833				
Butterfat Price			1.3189	1.3472				
Butterfat Recovery			0.9	0.9				
Fractional pound of butter			1.1870	1.2125				
Class IV BF to Class III			0.5088	0.5707				
Fat to True Protein Ratio			1.17	1.214				
Protein Before Adjustment			1.4920	1.5219				
Adjustment to Protein			0.5953	0.6929				
Component Prices	1.3189	1.3472	2.0873	2.2148	0.7231	0.7613	0.1369	0.1746
Diff		0.0283		0.1274		0.0382		0.0377

Using Current Formula
Based on Changes
Difference

At Standard Tests				
Class I	Class II	Class III	Class IV	
11.64	11.60	11.64	10.90	
12.33	12.03	12.33	11.33	
0.70	0.43	0.70	0.43	

Using Current Formula
Based on Changes
Difference

Prices At Test Cwt					
Class I	Class II	Class III	Class IV	Blend	
9.70	16.80	11.73	12.78	11.71	
10.36	17.33	12.42	13.24	12.35	
0.66	0.53	0.69	0.46	0.63	

Using Current Formula
Based on Changes
Difference
Per Avg \$/Producer

Dollars At Test (\$000,000)					
Class I	Class II	Class III	Class IV	Pool	
\$4,393	\$2,537	\$5,554	\$1,645	\$14,129	
\$4,692	\$2,618	\$5,878	\$1,704	\$14,893	
\$299	\$81	\$324	\$59	\$764	
				\$14,868	

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CME Commodity Products

Daily Dairy Report

Dairy market information provided by Alan Levitt

Vol. 11, No. 35 / February 23, 2007

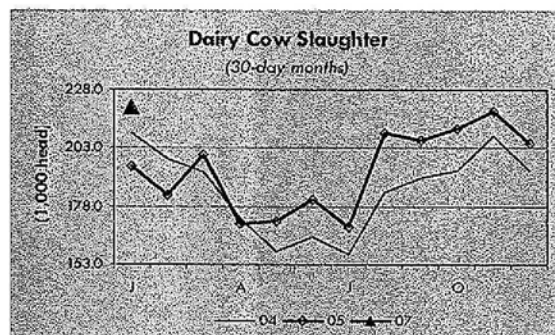
NEW MAKE ALLOWANCES TAKE EFFECT

The Class I mover for March is \$14.25, up 86¢ from February, and up \$1.76 from a year ago. For the first time since November 2005 there will not be an MILC payment. This price includes the new Federal Order make allowances; yesterday a District Court judge ruled against a group of dairy producers suing to block implementation of the revised formulas.

The new formulas, which also reduce Class III prices by 25¢ and Class IV prices by 17¢, will be used for February Class III/IV prices, announced Mar. 2. Yesterday's ruling was considered partly responsible for a big drop in milk futures today.

Slaughter numbers are picking up. Dairy men sent 227,700 cows to slaughter in January, up from 201,500 a year ago, according to USDA's "Livestock Slaughter" report released this morning (see chart). That's the most cows culled in one month since December 2003.

NASS dairy product prices for the week ending Feb. 10: cheddar blocks \$1.3240 (+2.08¢ vs. the prior week); barrels \$1.3591 (+1.04); butter \$1.2088 (-1.33¢); nonfat dry milk \$1.0974 (+0.29¢); dry whey 61.41¢ (+2.99¢). **cme**



FEBRUARY 23 TRADING ACTIVITY

Class III Futures				Class III Options Calls			Class III Options Puts			Class IV Futures		Butter Futures - Physical delivery		Butter Futures - Cash settle	
Settle (\$)	chg. (¢)	volume	open interest from previous day	Settle (\$)	chg. (¢)		Settle (\$)	chg. (¢)		Settle (\$)	chg. (¢)	Settle (¢)	chg. (¢)	Settle (¢)	chg. (¢)
FEB 07	14.17	-22	2	2828	14.25 @ .00	-14	14.00 @ .00	NC		13.10	-20			121.500	NC
MAR	14.62	-13	94	3082	14.75 @ .08	-6	14.50 @ .08	+3		13.60	NC	127.500	-0.500	124.000	-0.125
APR	14.72	-19	155	2936	14.75 @ .37	-10	14.50 @ .28	+7		13.80	NC			128.000	NC
MAY	14.60	-18	312	2812	15.00 @ .47	-10	14.75 @ .44	+7		13.90	NC	131.000	NC	132.000	NC
JUN	14.95	-18	288	2700	15.00 @ .58	-10	14.75 @ .51	+7		14.00	NC			133.000	+0.750
JUL	15.45	-15	56	2375	15.50 @ .72	-8	15.25 @ .64	+6		14.85	NC	135.000	NC	135.250	+0.250
AUG	15.68	-7	60	2407	15.75 @ .78	-4	15.50 @ .72	+2		14.85	NC			136.250	-0.250
SEP	15.80	-8	50	2417	16.00 @ .80	-4	15.75 @ .86	+3		14.85	NC			139.000	-0.750
OCT	15.50	-8	75	2245	15.50 @ .92	-5	15.50 @ .92	+3		15.00	NC			141.500	+0.250
NOV	15.16	-4	72	2024	15.25 @ .91	-2	15.00 @ .87	+2		15.00	NC			142.500	+0.500
DEC	14.85	-8	51	1880	15.00 @ .91	-5	14.75 @ .93	+3		15.00	NC			142.500	NC
JAN 08	14.80	+2	37	592	15.00 @ .93	+1	14.50 @ .87	-1						140.750	NC

> Spot Prices (with change, in cents, from previous day):

Block cheese	\$1.3700 (NC)
Barrel cheese	\$1.3500 (-2.00)
AA Butter	\$1.2100 (NC)
NFDM Extra Grade	\$1.4500 (NC)
NFDM Grade A	\$1.5250 (NC)

> Milk Prices (with change from previous month):

Jan. Class III milk (USDA) ...	\$13.56 (+\$0.09)
Jan. Class IV milk (USDA) ...	\$12.53 (+\$0.23)

> Futures Volume and Open Interest

	Volume	Open interest
Class III.....	1,360*	32,282
[*990 Pit, 370 Electronic]		
Class IV.....	0	56
NFDM.....	0	283
Butter (physical delivery).....	20	324
Butter (cash settle).....	70	3,367

> Options Volume and Open Interest

	Volume	Open interest
Class III.....	245	26,169
Class III Midi.....	0	245
Butter (physical delivery).....	0	30

Futures and options volume and open interest from previous trading day

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